ENGINEERING NEWS-RECORD

FEBRUARY 24, 1949

Chiefs of Engineers—incoming Maj. Gen. Lewis A. Pick, left, and retiring Lt. Gen. R. A. Wheeler

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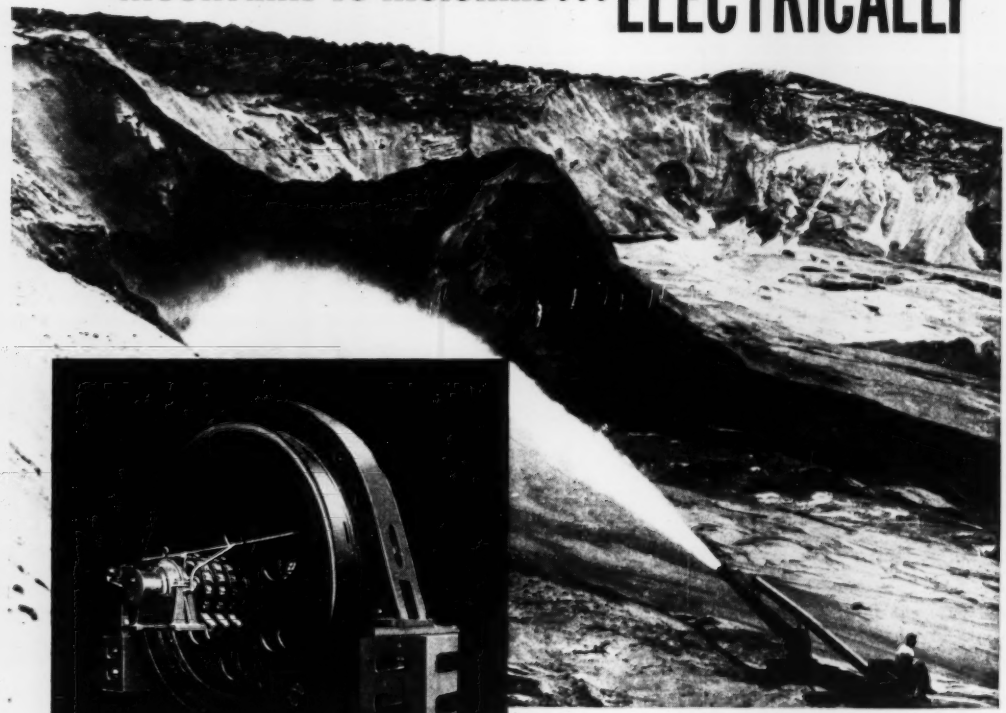
mountains to molehills . . . ELECTRICALLY



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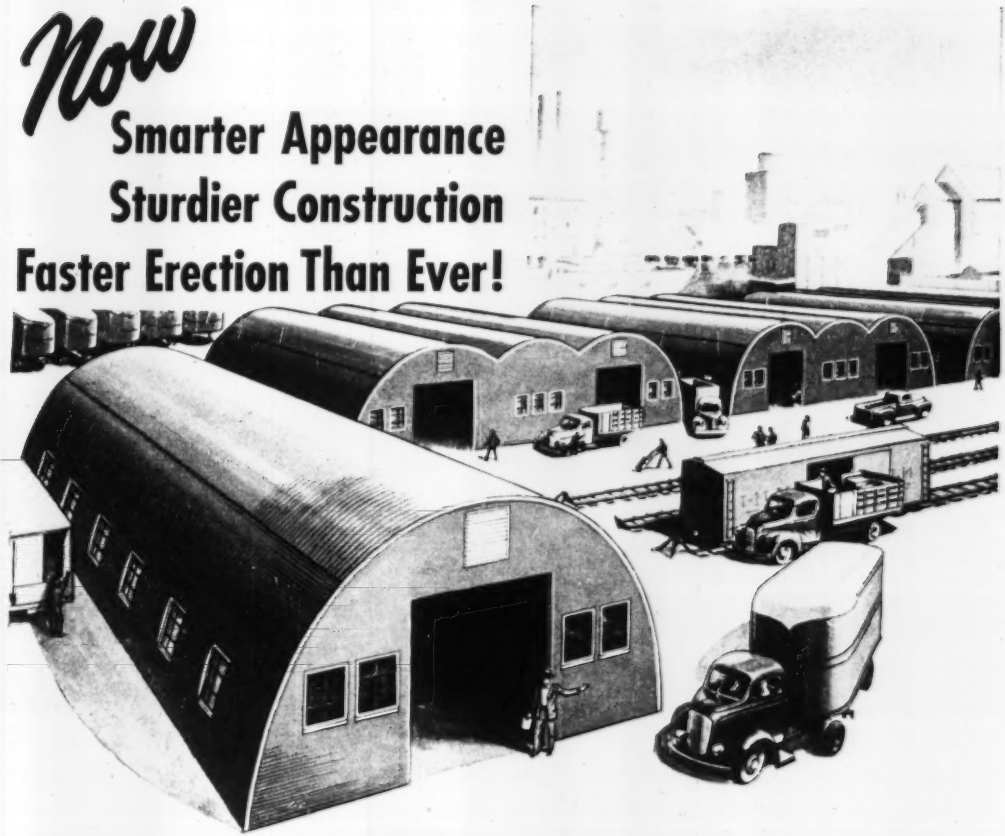

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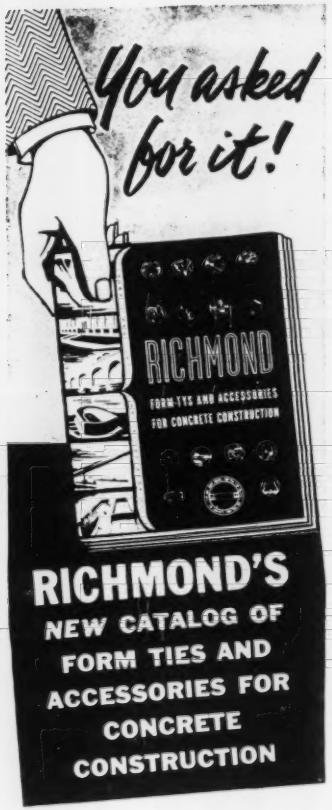
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ENGINEERING NEWS-RECORD

VOLUME 142 FEBRUARY 24, 1949 NO. 8

WALDO G. BOWMAN
Editor

DEPARTMENTS

The Construction Week	5	Men and Jobs	24
Editorials	7	Obituaries	26
Developments Abroad	15	New Products	30
Engineering Schools	20	Construction Reports	54
Municipal Affairs	22	Construction Business	64

THE COVER PICTURE

The man with the pencil was "the man with the stick" to his engineer troops during the 15 war months in which he distinguished himself as builder of the Ledo Road.

The "stick" with which the men associated him was his long rattan walking cane—not the symbolic stick of authority. For General Pick is a mild-mannered man—capable of anger, but only the smoldering kind that can easily turn to determination and impatience to get things done.

Six-foot and square-jawed he gives an appearance of ruggedness, yet his quiet nature and easy smile make him look more like a country doctor than an engineer general.

Born in Brookneal, Va., 59 years ago, the general still has traces of a southern accent. He was graduated from Virginia Polytechnic Institute in 1914, was commissioned from OCS in World War I and recommissioned in the regular Army in 1919.

On March 1, General Pick leaves his post as Missouri River Valley Division engineer, where he has won fame for his part of the coordinated Pick-Sloan Plan, to take over as Chief of Engineers.

Lt. General Raymond A. Wheeler—looking over the chart with his successor—will become chief engineer for the International Bank for Reconstruction and Development (ENR Feb. 3, p. 51).

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---on cutting fuel bills in Half

During New England's severe winter of 1947-8, the J. C. Corrigan Company, Inc., of Dorchester, Mass., *cut its fuel bill nearly* 50% by installing a DRAVO *Counterflo* Heater. Coal for the previous winter season had cost this company between $1100.00 and $1200.00, whereas only $652.00 was spent for oil to fuel the DRAVO Heater during a similar period.

Besides fuel savings, the maintenance expense for the old heating system was practically eliminated because the DRAVO Heater operates automatically by thermostatic control. "Even more important" says J. C. Corrigan, President, ". . . part of our substantial increase in production this winter was due to the improved heating system."

Employees in the Corrigan plant manufacture custom-built conveying systems and need adequate warmth for efficient fitting and assembling. Previously, the plant was heated by a coal burning furnace using blowers and ductwork to distribute the warm air. Excessive roof heat losses in this 165' x 70' x 27' building, prevented it from being comfortable. To heat "cold spots" that developed, eight pot-bellied stoves were installed. Maintenance of this old heating method required three hours labor every day. Coal and ashes had to be hauled through the heart of the busy plant. Even with the eight stoves to supplement the coal-fired furnace, heat was inadequate and employees spent valuable production time huddling around the stoves.

In November 1947, one DRAVO *Counterflo* Heater with an output capacity of 2,000,000 Btu was installed. No ductwork was needed. Only fuel and power lines had to be connected and a vent stack installed. Now the entire factory area is maintained at the proper degree of warmth for workers' comfort and efficient production. During sub-zero weather last winter, the single DRAVO Heater delivered enough heat within 20 minutes after it was turned on to satisfy the thermostat's setting. Moreover, the DRAVO Heater is shut down to conserve fuel during non-working hours, whereas the coal furnace had to be fed over week-ends while the plant was not in operation to maintain some warmth for the Monday morning shift.

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*Heating and ventilating system and rear-corner windows with de luxe equipment optional at extra cost.

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THE CONSTRUCTION WEEK

ASK ATOM ADVICE—Professional engineers and editors of technical journals may be called in by the Atomic Energy Commission to assist the commission's staff in expediting release of information from AEC's accumulated mass of classified data and reports. Chairman David E. Lillienthal said recently that technical aid of this kind could "speed the process of selecting for early declassification" the non-secret information that would be most useful to engineers and to industry as a whole.

WAGE-HOUR FOR ALL—If you are now exempt from meeting the provisions of the federal wage-hour law, the chances are good that you'll be under the law by the time Congress calls it a session this summer. The law now covers 638,000 establishments, with about 22,000,000 workers, under the provision that they are "engaged in interstate commerce or produce goods for interstate commerce." Now the administration has proposed broadening that provision to include "all activities affecting commerce." Testimony before Congress brought out the fact that government lawyers could think of only two businesses that wouldn't be covered—barbershops and pool halls.

ALUMINUM GETS HOT—Interest in a major aluminum producing plant in or near northwest British Columbia—already under investigation by two other companies—got hotter last week with confirmation that the Aluminum Company of America is studying the hydro electric potential of the Canadian province. According to provincial authorities, the Alcoa plan is to establish a reduction plant at Skagway, Alaska, drawing power from British Columbia's Atlin district—rated as one of the great potential power sites in North America. Reynolds Metals Co., and the Aluminum Company of Canada, have also started studies of the potentials of the area (ENR Feb. 10, p. 5).

WATER, WATER EVERYWHERE, BUT—The arid island of Aruba—Dutch-controlled Caribbean site of huge oil refineries—now imports a total of nearly 25,000,000 gallons of water each month to supply its domestic requirements and for commercial (not potable) supplies. Standard Oil Co. of New Jersey reported its tankers pick up water supplies for Aruba after discharging oil cargoes and cleaning their tanks by special methods. Drinking water comes from the company's own tanks in New York Harbor; water for commercial use on the island is picked up largely from the Hudson River above Kingston—where fresh water begins.

LOAN MONEY GOES TO WORK—Italian counterpart (ECA) funds totaling $1,200,000 have been released for reclamation of 152,000 acres in the lower Volturno River area, northwest of Naples. The project will employ 2,400 men to concentrate on drainage work, river control and irrigation and power dam surveys—particularly surveys of a low dam across the Volturno above Capua.

HEATED SANDER—Harassed by a really tough winter, the management of Wold-Chamberlain Field—airport for Minneapolis and St. Paul—came up with a really effective combination that involved a sanding truck and a standard three-burner weed burner. Procedure was this: The truck went ahead of the burner, dropping sand in its wake. The weed burner followed, melting the sand into the ice on the runways. Result was good traction on runways previously unusable because of ice—and the sand stayed in place until the ice disappeared. Cost: (not counting equipment cost) $20 an hour for the weed burner, $30 for sand that covered a 6,000 ft. runway 90 ft. wide.

NEW TWIST ON AUTHORITIES—The Merrimack Valley Authority proposed by Representative Lane of Massachusetts would be more than a TVA-type agency to New England. In addition to power generation, flood control and navigation, the Lane proposal calls for reclamation work by the new agency to irrigate "family size" farms; and, financed by the U. S. Treasury, the agency would supply municipal water, and make loans to other public agencies for irrigation and power projects.

FEUDIN' AN' FUSSIN'—The long-standing feud between the Irrigation Districts Association of California and the Bureau of Reclamation over terms of the Central Valley water contracts will continue, it appears. In recent elections of directors for the various districts, anti-USBR forces got a slight edge, but neither side gained a clear-cut majority. Extent of interest is apparent in one district where, two years ago, only 82 votes were cast for director. This time the total of votes cast was 2,052.

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A Contractor's Claim To Be Copied

ONE OF BRITAIN'S largest contractors, George Wimpey & Co., Ltd., announces in a current advertisement "No civil engineering or building job is too big for Wimpeys —or too small—or too far off." It is a claim that must be copied by more and more American construction organizations if the reponsibilities and opportunities of the United States' world position are to be met.

Good Labor Law Still Possible

THE ROUGH SLEDDING that repeal of the Taft-Hartley labor law is experiencing in Congress was prophesied last December by Louis Sherman, counsel for the International Brotherhood of Electrical Workers at the AFL Building and Construction Trades convention when he said: "We're going to have to explain why this law is bad." The explanations are not coming easily with respect to such things as the ban on jurisdictional strikes and secondary boycotts and the permissive use of injunctions against strikes threatening the national welfare. It may be expected, too, that the Taft-Hartley definition of professional employees and its provisions distinguishing them from non-professionals as bargaining units will not be easily scrapped. Engineers Joint Council testified before the Senate Labor Committee recently on the great improvement in this respect that occurred under the Taft-Hartley law. The votes are available in Congress for a new labor law, but not for reinstatement of the one-sided Wagner Act. Therefore, those who feel that the fairness to both labor and management promised by the Taft-Hartley Act should be retained have cause for optimism. They should continue to press Congress for a statesmanlike decision.

Government Reorganization

THE FINE JOB that the Hoover Commission and its various committees have done in drawing up a reorganization plan for the executive branch of the federal government is bound to be worth many times its $2 million cost. That it must be accepted on an all-or-nothing basis, as Mr. Hoover and President Truman urge, is not so clear.

Many reforms are possible without a complete revolution. It is possible that some of the committees, in their zeal to make definite recommendations, have mistaken a mere change for an improvement. It is possible that the membership of a committee may have been unwittingly chosen to include only proponents or opponents of a given course of action—which may be the wrong one. It is possible that the chairman of a committee may have dominated its report with his own ideas. And it is possible that the commission itself, in choosing to approve or disapprove the recommendations of its committees, may make an error.

All these possibilities are now subject to check by Congress, where in public debate the recommendations can be thrashed out. That pressures will be brought to bear on Congress to exempt some department, agency or bureau from the axe of reorganization is to be expected. To assume that all of these pressures are selfish, sinister and devoid of regard for the public interest will be wrong. To grant that the biggest pressure represents the right would also be mistaken. The important thing for Congress (and for the construction industry, where its interests are involved) is to consider every proposal with an open mind and with careful regard for the overall public welfare. Modernization and streamlining of the hodge-podge of Washington is vitally necessary, and the President should be granted every authority to bring this about that Congress can conscientiously grant him. Much can be accomplished even though the Hoover Commission's recommendations are accepted only in part.

Functional Code for New York State

IN ANNOUNCING his intention to formulate a statewide building code of the performance-standards type, Governor Thomas E. Dewey of New York has set a goal that is probably unattainable at present. Even if he fails to reach it, however, the progress he makes toward it will justify his efforts.

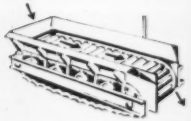
A statewide code can offer many benefits to small communities that cannot afford to prepare a code; to materials manufacturers who wish to introduce new materials and now have to get separate approvals in every city; to building designers and contractors, who currently are restricted to local practice by variations in requirements in the various localities; and to the community in general, which has to bear the added cost due to the inadequacies of existing regulations. But insufficient data are available to permit writing a purely performance-standards code now, and most building officials doubt that one could be enforced if it were written.

If a statewide code were promulgated, and if it incorporated whatever performance standards present knowledge permits, the code situation in New York would be vastly improved. The first step toward performance standards could well be passage of an enabling act to permit municipalities to adopt existing standards and codes by reference. This would not only enable them to adopt the state code when it is ready, but would facilitiate immediate modernization of their present regulations without undue cost.

HOW 9 MEN DO THE WORK OF 125 AT THE "BEE ROCK" QUARRY

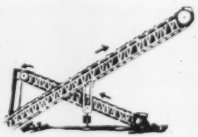
1. 130 foot blast holes drilled in quarry ledge. Dozer piles rock for ¾ yard shovel.

2. Two 4 yard trucks haul rock to hopper built over PIONEER 3' x 10' APRON FEEDER.

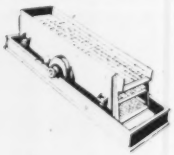


3. PIONEER APRON FEEDER with clutch control regulates flow of material to primary crusher.

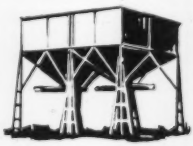
4. Overhead eccentric action of PIONEER 20 x 36 JAW CRUSHER forces material down and through, increasing output.



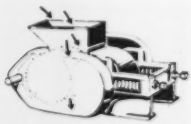
5. PIONEER BELT CONVEYORS carry rock in continuous flow to vibrating screen.



6. PIONEER 4' x 12' three deck VIBRATING SCREEN separates rock accurately into sizes required for the particular job.



7. Specification rock chuted to PIONEER STORAGE BINS. Oversize carried to secondary crusher on 30" PIONEER CONVEYOR.



8. Secondary crushing handled by PIONEER 40 x 22 ROLL CRUSHER.

At this quarry near Searcy, in White County, Arkansas, a nine man crew is getting a job done that used to require 125. But hardly alone. The bulk of the work falls upon PIONEER EQUIPMENT... the proved leader in low-cost operation. Producing specification rock for road construction at a 120 ton per hour clip at the "Bee Rock" quarry is just another tribute to PIONEER's high speed performance.

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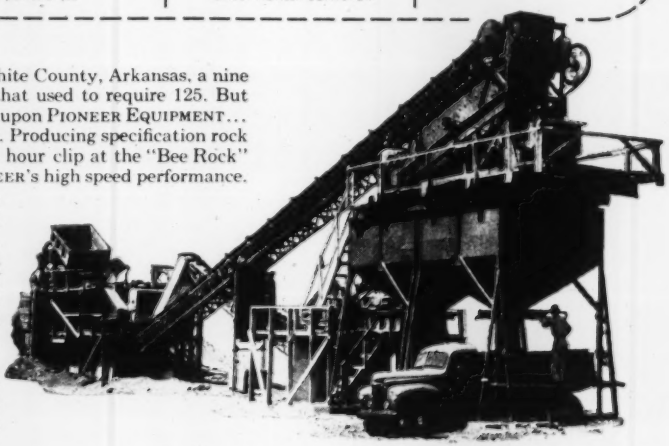

IN ADDITION to making quarry plants like this one, Pioneer also builds portable quarry and gravel plants, washing plants, asphalt plants as well as feeders, crushers, screens and conveyors.

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ENGINEERING NEWS-RECORD

FEBRUARY 24, 1949 VOL. 142 NO. 8

EJC defends Taft-Hartley definition of "professional"

Senate committee, goaded by ASCE telegrams, hears members of the Engineers Joint Council argue for protection of professional employees from NLRB jurisdiction

Representing more than 100,000 engineers at a hearing last week of the Senate Committee on Labor and Public Welfare, a panel from the Engineers Joint Council urged retention of the Taft-Hartley Law definition of professional employees.

It was only after congressmen had received scores of telegrams from local sections of the American Society of Civil Engineers that the Senate group granted the council a hearing.

Panel members pointed out that the present law for the first time defines professional employees and gives them statutory protection instead of making them subject to NLRB interpretation, as was the case under the Wagner Act.

Statement of panel

Citing cases decided both under the Wagner Act and the Taft-Hartley Law, the engineers declared:

"A fundamental difficulty with the Wagner Act, as it affected professional employees, was that no distinction was made between professional and non-professional employees in spite of the facts that their viewpoints and abilities are inherently different and that their conditions of employment cannot be made subject to a common standard. There is no yardstick by which creative ability can be measured. To attempt application of the same standard of measurement for services of professional men and non-professional men is not in the public interest. The output of professional employees cannot be standardized as can that of manual and skilled labor. It cannot be measured in terms such as the number of brick a man should lay in a given number of hours, the number of cubic yards of dirt that should be moved, the square yards of painting, the amount of type to be set, bolts to be placed, feet of conduit to be laid, or in terms of any other similar unit.

"In spite of all this, prior to enactment of the present law, professional employees often were included against their will in heterogeneous groups and compelled to accept representation which they did not desire in collective bargaining procedure. The results were most unsatisfactory. There was serious effect on the morale of professional employees and generally poor relationships developed between those employees and labor unions and employers. Even though the vote of the professional employees were unanimous against proposed representation, it was of no avail. By sheer numerical force the professional employees were denied effective representation.

"It is futile to expect that a forced grouping of professional and non-professional employees could possibly form an 'appropriate bargaining unit'."

Seven societies represented

The Engineers Joint Council is made up of the president, junior past-president and secretary of each of the following societies: American Society of Civil Engineers, American Institute of Mining and Metallurgical Engineers, American Society of Mechanical Engineers, American Institute of Electrical Engineers, and American Institute of Chemical Engineers. Included also on the panel were representatives of the American Society for Engineering Education and the National Society of Professional Engineers. E. Lawrence Chandler, assistant secretary of the American Society of Civil Engineers, acted as chairman of the panel and presented the general statement to the legislators.

Group formed to do building research

The National Academy of Sciences and its operating agency, the National Research Council, have set up a Building Research Advisory Board to do the job for building construction that the Highway Research Board has been doing for roads during the last 30 years. The new board held its organizational meeting in Washington last week.

At that meeting, the 27-member board canvassed the research problems of the vast, complex industry that designs and erects the nation's buildings. It set up as its first task the analysis and definition of the research needs of the business, with the objective of selecting for first research study those phases that will get the most far-reaching—and possibly the quickest—results in producing better structures at lower cost.

For administrative expenses, the board has set up an operating budget of $100,000 a year. This budget does not cover costs of research, which will be carried on by the many institutions, agencies and business concerns already doing such work, with others to be brought into the program as later required. Funds to finance its activities will be raised not by the board itself, but by the research activities committee of the Construction Industry Advisory Council, created under the aegis of the U. S. Chamber of Commerce.

A primary problem facing the Building Research Advisory Board at the moment is the selection of a full-time director. The board hopes to make an appointment within three months, but if the work load increases as rapidly as anticipated it may have to draft a temporary director to take charge until such time as a permanent head can be named.

For the present, Louis Jordan, executive secretary of the engineering and industrial research division of the National Research Council is shouldering the central office responsibilities of the new board. He is serving as the board's acting secretary at the NAS-NRC headquarters, 2101 Constitution Ave., Washington, D. C.

Heading the board as chairman is Frank B. Jewett, formerly head of the Bell Telephone Laboratories and for many years president of the National Academy of Sciences. The board comprises a broad gamut of leaders from the many sectors of the building industry—not omitting contractors and labor executives.

NEWS BRIEFS

Housing — Georgia Construction Co., Ltd., VANCOUVER, B. C., has contract for the first phase of an $8,000,000 low-rental project in SOUTH VANCOUVER . . . A $2,500,000 project of 76 homes in the $30,000 bracket will be built on a 60-acre citrus tract in PHOENIX, ARIZ., by Kenyon and Emmett Ballard . . . Work is to start soon on a $6,000,000 rental housing job at OMAHA, NEB., by the Byrne Organization of Washington, D. C. It will be underwritten by the Omaha Chamber of Commerce . . . Thos. Grinslade will build 100 houses in northeast INDIANAPOLIS, IND., to sell for between $6,000 and $7,000 . . . Plans for a million-dollar veterans project in the EAST LYNN, MASS., area have been approved by the State Housing Authority . . . A $20,000,000 development of elevator apartments to house 2,600 families and a shopping center at FORT LEE, N. J., is being considered by Ralph J. Solow and Sidney Sarner who have bought 64 acres on the Palisades for the purpose . . . A $2,500,000 veterans' development, Scott Terrace, has been launched at HOUSTON, TEX., by Martin Nadelman and associates . . . Gov. J. H. Duff says a program to provide low-rental housing in PENNSYLVANIA will be introduced in the General Assembly . . . Bids have been taken for Nostrand Houses, a N. Y. City project to be built in BROOKLYN without cash subsidy, and to provide 1,152 apartments for 3,992 persons in 16 six-story buildings on 23.8 acres, bounded by Aves. V and X and Bragg and Batchelder Sts.

Water Supply and Sewers—CANTON, OHIO plans to start a $3,500,000 sewage and garbage disposal plant this year . . . The Lake City sewer district near SEATTLE, WASH., has authorized utility bonds amounting eventually to $6,700,000 for a treatment plant, trunk and lateral sewers . . . N. Y. State Department of Public Works has approved a proposed $500,000 municipal public works planning project providing for the construction of a sewage treatment plant by the city of NEWBURGH . . . First public hearing of the newly-formed Ohio River Compact Commission will be held Feb. 16, to determine how much treatment should be given to sewage discharged into the Cincinnati pool of the Ohio River. The city has requested a decision so it can go ahead with plans for its sewage treatment system. Preliminary estimates indicate that a sanitary sewer will cost about $1,000,000 . . . INDIANAPOLIS, IND., is trying to get state legislation to give the Board of Works assessing power so that work can proceed on a $3,000,000 sewer construction program . . . The UNITED STATES needs more than 80,000 miles of new sewer lines and at least 12,000 new treatment plants to meet the problem of water pollution control, Maj. Gen. Philip B. Fleming, Federal Works Administrator, has told members of the New York State Sewage Works Association. "New York State alone needs sewage works that would cost more than $1 billion," he said, "and California, Illinois, Michigan, Missouri, New Jersey, Ohio and Pennsylvania each requires sewage undertakings that would involve expenditures of $100,000,000. Our states and communities will need at least $3 billion for treatment works and other installations."

Industrial Construction — Arkansas Power and Light Co. has retained Ebasco Services, Inc., New York, to prepare plans and specifications for a 132,000-kwh. generating plant to be erected near FORREST CITY, ARK. Cost is estimated at $15,000,000. The same firm has made plans for a $26,000,000 generating plant for the Kansas City Power and Light Co. . . . Right-of-way and survey work has begun on the $200,000,000 natural gas pipeline for the Transcontinental Pipeline Corp. to extend 1,800 miles from MCALLEN, TEX., to N. Y. CITY, while construction has started on the $3,500,000 gas pipeline for the Lone Star Gas Co., 70 miles from OPELIKA to DALLAS, TEX.

Bids to be opened Mar. 23 on 343 Oak Ridge houses

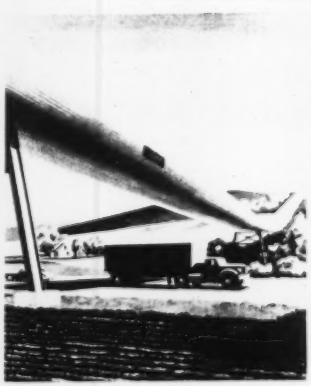
The Oak Ridge, Tenn., office of the Atomic Energy Commission recently issued invitations to bid on the construction of 343 single and duplex family dwelling units, including necessary road work and installation of utilities. No estimate of the cost has been released, but it is expected to approximate $4,000,000.

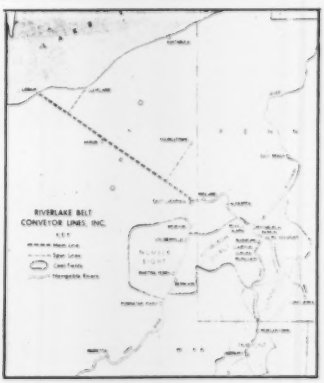
This is the third step in a long-range program for building permanent housing. It will occupy a site adjoining a 500-home development now under construction.

For bidding purposes, the proposed work is broken down into six projects. Bids may be entered on the projects separately, in any combination, or on the total job. Bids will be received until 2 p.m. March 23.

Of the six projects, four involve construction of housing groups to contain 82, 67, 70, and 124 units, respectively. A fifth project calls for installation of fire alarm and electrical distribution systems. The sixth compromises roadways, sidewalks, sewers, distribution systems and landscaping.

Two housing developments are already under way at Oak Ridge. Merritt, Chapman and Scott, Inc.—awarded the first housing contract for $8,000,000—has completed 35 percent of the work on 29 garden-type apartment buildings containing 453 units. In the second phase of the program, John A. Johnson & Sons, Inc. is working on foundations and site preparation for 360 of 500 single-family dwelling units under a $6,531,000 contract.





OVERLAND CONVEYOR PROPOSED—A two-way belt conveyor to link the Ohio River and Lake Erie and serve the coal and steel industries has been proposed by H. B. Stewart, president of the Akron, Canton & Youngstown Railroad. To total 130 miles in length and cost $210 million, the system would require 151,000 tons of steel, 267 miles of rubber belting and 400,000 troughing idlers. (ENR Feb. 10, p. 5)

White House repair $5.4 million

President Truman last week asked Congress to act promptly on his request for $4,500,000 to carry out a program of repair on the White House that will result in virtually complete reconstruction of the historic building.

Intensive exploration into the existing structure—under a $50,000 appropriation by the 80th Congress—has revealed conditions "much worse than first suspected," the President said. With the Presidential family moved across Lafayette Square to Blair House, the work of exploration and exposure has been going on since November under direction of a consulting board, working with the Public Buildings Administration and the White House architect.

Under the program presented to Congress in Mr. Truman's letter, the inside of the historic building would be almost completely gutted, leaving only the outside walls of the original structure standing. Inside the walls, but standing on its own foundation, would be a steel-frame structure to carry the full load of the second and third floors and the roof. The wooden second floor would be replaced with concrete and steel, and all interior partitions would be removed and rebuilt of modern materials.

In outward appearance, the reconstructed building would be unchanged, and the principal rooms would be faithful architectural replicas of the originals. Other rooms will be restored to nearly their original appearance, but will be made to conform more nearly with the purposes for which they are used and the demands of modern living. The entire building would be air conditioned.

The reconstruction program would affect only the original 85 x 170-ft. structure, exclusive of the more recent north and south porticos and wings.

A new roof frame and a concrete floor slab had been installed during the Coolidge administration, but dangerous sagging of the wood-frame second floor and serious fire-hazards in the older parts of the structure, precipitated the investigation of the building's condition.

Although the old stone masonry walls will be left standing, the investigators recommended that they be independently underpinned to a sound sand-gravel stratum 15 ft. below the present footings, which rest upon a clay containing organic matter. The work—if approved by Congress—will take from 15 to 18 months to complete, the President said.

BLS calls lay-off "above normal"

An employment drop somewhat larger than the normal seasonal decline occurred between mid-December and mid-January, the Bureau of Labor statistics reported last week. During that period the number of employed nonfarm workers decreased by 1,750,000, falling from 46,087,000 in December to 44,436,000 in January.

Seasonal changes accounted for most of the drop. For example, 1,250,000 of the total reduction during the month took place in construction, in wholesale and retail trade, and in the postal service. These activities normally show large seasonal declines at this time of year.

Contract construction accounted for 200,000 of the decline from December to January. This drop is about 100,000 greater than the reduction a year ago, but BLS says that it reflects a more usual pattern of seasonal change than was apparent last year. Construction employment of 1,881,000 last month was almost exactly the same as in January 1948.

Of equal interest are the figures on unemployment released by the Bureau of the Census. A decrease of employment does not necessarily mean an equivalent increase in number of unemployed. The latter figure is influenced by the influx into the market—or withdrawal from it—of seasonal or part-time workers.

Unemployment rose by more than 700,000 between early December and early January. Total unemployed of nearly 2,700,000 in January represented an increase of 600,000 over the same month last year. A figure of 2,000,000 unemployed—made up of people changing jobs—is considered normal under conditions of so-called full employment.

BLS to poll cause, extent of construction injuries

For the first time since 1937, the industrial hazards branch of BLS is making a special, detailed survey of injuries in the construction industry. Questionnaires have just gone out to some 53,000 general and specialty contractors.

The survey, covering 1948, asks data on number of employees in different crafts, total hours worked, number of cases of deaths, permanent total disability, permanent partial disability, and temporary total disability.

From the questionnaires, BLS will determine which occupations in the industry are most hazardous. Later, by personal visits, it will try to find out what causes the accidents in the high-hazard occupations.

Equipment maker offers to back dealers' credit

In a move to fill a gap in its distributors' financing procedure—and to keep distributor inventories high—the Worthington Pump and Machinery Corp. last week announced it would enter the financing field to back up dealers' credit.

Tagged as a "floor stock repurchasing plan," the program guarantees authorized Worthington distributors that the credit and financial standing of the company will back up the credit of individual distributors when they apply to their local banks for floor stock financing. Banks are assured that stock financing.

In effect, lending institutions are guaranteed that the distributor can reclaim at least 80 percent of the cost of his stock, if he does not succeed in selling it within seven months.

Announcing the plan at a sales meeting in New York, company officials commented that because prices of many items carried by distributors make it necessary to carry inventories valued at many thousands of dollars, banks unfamiliar with this type of sales have hesitated to advance adequate credit.

Claims vacuum process gives 50% cement saving

The cement content of concrete can be cut to less than half of that normally used without loss of strength, if the vacuum process is applied to withdraw excess moisture.

This conclusion was offered by Karl P. Billner, president of Vacuum Concrete, Inc., at Yale University Feb. 16 to a meeting of architects and engineers sponsored by the student chapter of the American Society of Civil Engineers. At Yale 13 years ago, the vacuum process first was announced.

Citing test results to corroborate his statement, Mr. Billner said the technique is now being used abroad to conserve cement.

Tests on a 1:6:10 vacuum-processed concrete indicated a 7-day strength of 2,700 psi., compared to 800 psi. for the same mix untreated. A 1:4:6 mix withstood 3,700 psi. in 7 days when vacuum processed, but only 2,000 psi. without this treatment.

Maine Turnpike gets needed toll raise

Tolls on the 44-mile Maine Turnpike will be raised 20 percent May 1, since revenues during its first full year of operation fell 18 percent below original estimates. Details of this deficiency and reasons for it are set forth in a recently published summary of operations.

A total of 1,516,171 revenue vehicles used the toll road in the year beginning Dec. 13, 1947, when it was opened to traffic. But the average toll was 43.3 cents instead of an estimated 55 cents. Reasons presented for this low average are these:

More passenger cars made partial trips than anticipated; the average trip was 35.5 miles. More light and medium trucks used the road than expected. Heavy trucks were slow in starting to use the route. Other reasons set forth for the inadequate income are the severe weather conditions experienced last winter and lack of service stations and restaurants along the route until recently.

Net income on the highway for the year, before payment of interest on the debt, was just under $450,000.

Operating expenses were $220,500 for the year. This amount is $60,000 above the annual expense figure originally estimated in 1945.

Estimates of revenues were for normal operational conditions, and both the Maine Turnpike Authority and consulting engineers Howard, Needles, Tammen and Bergendoff, are of the opinion that this normalcy was not reached until the year's final quarter. For example, revenue from trucks in December was 96 percent above that of March.

New estimates set the 1949 gross receipts at $892,000, assuming 20 percent toll increase in four of the nine traffic classifications. Net income on the project for 1949 is estimated at $690,000. A $742,000 net income is expected in 1951, when the first amortization payment ($680,000) must be made.

With construction now virtually completed, the authority has recently authorized an additional $600,000 issue of 2¾ percent Turnpike Revenue Bonds. These have been sold to cover construction costs in excess of the $20,000,000 estimated in 1947.

PERSPECTIVE . . .

AEC explores reactor potential

Work on reactors—which have produced a lot of thus far useless by-products, including heat—has ceased being a controversy and has become a program.

In his recent talk before the American Academy of Arts and Sciences, Atomic Energy Commissioner Robert Bacher revealed that AEC now has a plan for exploring the unknowns in practical atom-power installations.

Three questions present themselves. AEC expects to answer them by projected research programs of from two to five years in length. The questions are:

(1) Can a reactor be built to produce more fissionable material than it consumes? If not, uranium-235 is just the world's best known source of destructive force—of no worth beyond its proven military use.

(2) Can atomic power plants do anything that conventional plants can't do? By 1953 AEC may know if an atomic engine will permit warships to range tens of thousands of miles without refueling.

(3) Can reactors put out electrical power for industrial use at a cost competing with existing steam or hydro plants? AEC hopes to know this answer, too, by 1954 when present plans call for completion of a full-scale atomic power plant.

All reactor problems are now under a single AEC division formed in a reorganization two months ago. The division has a clearly defined program fully planned and partly under way.

Four projects form the bulk of AEC research plans. First of the planned installations is a test reactor where a very large number of fissions will be produced in a small space, to act as a proving ground for materials under consideration for later reactor construction. This materials tester will be built at some western test center which will act as an extension of Argonne National Laboratory in Chicago.

At Argonne Laboratory one reactor to test atomic energy fuel breeding will be built; construction is ready to start. And some time this year General Electric will begin construction of a similar reactor at Knolls Atomic Laboratory near Schenectady, N. Y.

A prototype of a propulsion engine for naval vessels will be built by Westinghouse, starting in 1950 at the western test center—mentioned above and, as yet, not located by AEC.

Other side issues, such as atom-propelled aircraft, have already been studied, and studies will continue. More reactors than these mentioned are in AEC's bag of tricks for the future.

Californian sees freeway starting new highway era

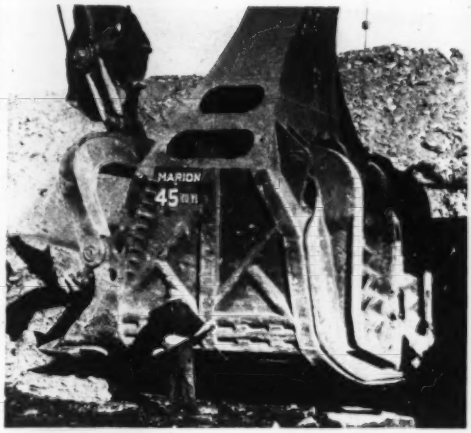
A new era in highway transportation is just beginning with the greater adoption of the freeway principle, according to Fred J. Grumm, deputy state highway engineer of California.

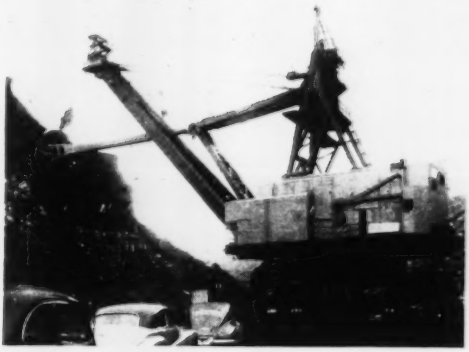
In an address before the first California Institute on Street and Highway Problems held in Berkeley recently, Mr. Grumm reviewed the progress of freeway construction in California beginning with the legislative act in 1939, making such construction possible. He discussed highway construction under California's Collier-Burns Act. This program, even though the largest in the nation, is still only doing half the job that is required to meet the deficiencies, Mr. Grumm said.

The Berkeley meeting was sponsored by the recently established Institute of Transportation and Traffic Engineering of the University of California (ENR Sept. 2, p. 55). More than 300 city, state and county street and highway engineers attended. Emphasis was placed on problems at the city and county level; 40 county road departments were represented out of 58 in the state.

In another address F. N. Hveem, staff materials and research engineer, California Division of Highways, reviewed the progress in use of the new design method he has proposed (ENR July 10, p. 134).

Other speakers included Harmer E. Davis, acting director, Institute of Transportation and Traffic Engineering, University of California; C. H. Purcell, director, California Department of Public Works; G. Donald Kennedy, vice-president for highways Automotive Safety Foundation; and R. T. Drosey, street and traffic engineer, Los Angeles, Calif.





EARTH-MOVING MONSTER—This giant bucket uncovers coal in southeastern Ohio by scooping earth in 45 cu. yd. bites

Biggest dipper strips coal fields

Long-noted for the incredible size of its excavation equipment for removing overburden, the coal strip-mining industry in southeastern Ohio is currecently testing what is said the world's largest power shovel dipper. This 45-cu.yd. scoop can strip 80-ft. of overburden, and by virtue of its long boom can swing it over two-thirds of a city block and dump on top of a seven-story building if that should be required. The shovel is designed to operate on a one-minute digging cycle.

Development of the 45-cu.yd. dipper by the Marion Power Shovel Co. was based on the decision to probe the "economic ultimate" of modified armor plate steel in power shovel design and construction. During the past two years the company has built and placed in operation nine 40-cu.yd. dippers, fabricated of modified armor plate. Prior to that, a 35-cu.yd. dipper had been the world's largest.

Designers of the new dipper believe its increased size will prove practical and economical in coal mine stripping. The weight factor apparently has been solved, since the 45-cu.yd. dipper fully loaded, weighs no more than the loaded 35-cu.yd. dipper of three years ago. Two unknown factors, however, are (1) adequate strength of all component parts and (2) continuity of daily operation without excessive maintenance or repair costs.

One substantial saving in weight was made by substituting armor plate for cast manganese formerly used in the construction of the dipper lip on the 35-cu.yd. dipper. Although the lip is subject to extreme wear, the armor plate has proved sufficiently resistant to abrasion to justify the change.

Other improvements in design involve easier and more rapid filling of the dipper. The curve of the dipper teeth in the new dipper is more pronounced, enabling it to enter the bank more readily. Another improvement is a triple-deck "sandwich" of rubber and steel, forming bushings for the three giant hinges carrying the dipper door.

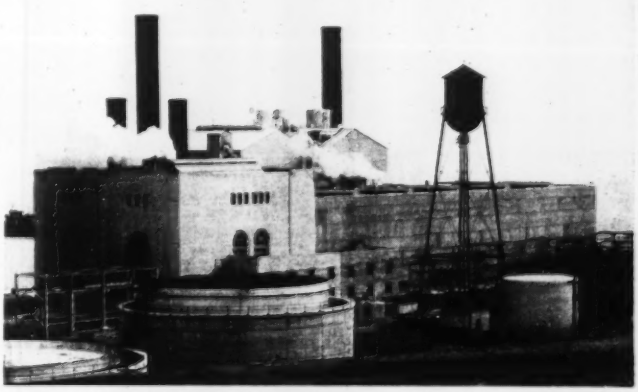
PG&E commissions a new $30 million power plant

A $30,000,000 expansion of the Pacific Gas & Electric Co.'s Station P steam plant in San Francisco was commissioned Feb. 8, adding 298,000 hp to the system's electrical capacity.

Formal presentation of the completed plant to the company was made by C. P. Weaver, superintendent of construction for Stone & Webster Engineering Corp., builder.

The original steam plant was built in 1929, with an installed capacity of 62,000 hp. Work was started on installation of two new turbine-generator units in July, 1947.

The expansion was part of the utility's $600 million postwar construction program, which will add nearly 2,000,000 hp to the PG&E system by the end of 1951.



ADDITIONAL 298,000 HP will be made here for PG&E. (Wide World Photo)

California pollution control planned

An extensive program designed to curtail pollution of California's underground and surface water supply recently has been presented to the state legislature.

In the form of several bills, the plan was presented by Assemblyman Randal F. Dickey of Alameda, chairman of an interim investigating committee on water pollution, after two years' work in studying waste disposal throughout the state.

The proposals, generally, would place new requirements on all types of sewage and waste disposal, and would establish a state pollution control board and seven regional boards to administer the program.

Membership of the state board would be made up of the 7 chairmen of the local board. Acting in an advisory capacity would be the state directors of public health, national resources and agriculture, the state engineer and the chairman of the fish and game commission. The executive officer would be a registered engineer with at least five years of engineering experience relating to water pollution and waste disposal.

Other phases of the program would require a report to the state Department of Public Health of any disposal of sewage or industrial waste—or the effluent therefrom—on or into any land or waters of the state. It also is provided that this department may seek court action to stop any disposal procedure that causes contamination. Another bill would require that reports be filed with the state division of water resources on all water wells drilled in the state.

The program, if enacted, would have its greatest effect in curtailment of pollution from industrial plants. Relatively few new industrial waste treatment works have been undertaken recently pending the results of the Dickey committee work. If enacted, the program will mean a great increase in the construction of waste treatment works both by plants and by municipalities.

PIPE FROM LOS ANGELES will bring natural gas from Texas to New York. Consigned to Transcontinental Gas Pipe Line Corp., this 100-car trainload is the first string of 20,000 cars needed to complete shipment of the 1,840-mi., $200 million line, planned for 1951 completion. Consolidated Western Steel Corp., is the fabricator.

Truman names engineers to pollution control board

President Truman has appointed the six non-government members of the eleven-man Water Pollution Control Advisory Board established in the U. S. Public Health Service by the Water Pollution Control Act of 1948. The remaining members, representing federal departments and agencies named in the law, have been appointed to the board by the heads of those agencies.

Mark D. Hollis, assistant surgeon general, is the chairman of the board, designated by Surgeon General Leonard A. Scheele, head of the Public Health Service.

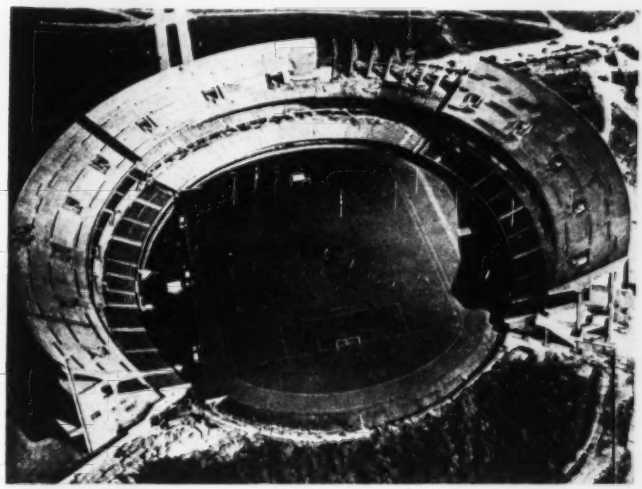
The non-government members are: Nathan T. Veatch of Black Veatch, consulting engineers, Kansas City, Mo.; Thomas Berrigan, director and chief engineer, Boston Metropolitan District Sewers; Michael Klein, chief engineer, Borough of Manhattan, New York City; L. A. Danse, chairman, General Motors Corp. industrial waste committee, Detroit; Dr. Stanley B. Freeborn, assistant dean, University of California College of Agriculture; and Carl D. Shoemaker, conservation director, National Wildlife Federation, Washington, D. C.

Government members

Representing government agencies on the board are the following four members: Federal Works Agency, James W. Follin, assistant administrator; Department of the Army, Hugh M. Arnold, executive officer to assistant chief of engineers for civil works; Department of the Interior, Milton C. James, assistant chief, Fish and Wildlife Service; and Department of Agriculture, Ralph Reeves Will, office of the secretary.

PORTABLE SMOG DETECTOR—The Pennsylvania State Health Department has unveiled a smog detector that fits on the door of an automobile and is powered by the windshield wiper vacuum system. Inspecting the device above are Dr. Joseph Shilen, state director of industrial hygiene; Charles Burns, designer; Dr. Norris W. Vaux, health secretary; and Joseph Mellor, assistant director of industrial hygiene, who originated the idea for the detector.

DEVELOPMENTS ABROAD



BIGGEST BOWL—Said to be one of the world's largest stadia, the new River Plate Stadium in Buenos Aires is capable of seating 100,000 sporting-event spectators. The huge bowl, built entirely of reinforced concrete, was designed by Roberto Gorostiagam, Buenos Aires civil engineer. Its three levels incorporate a special exit system with walkways projecting beyond the perimeter of the levels to permit rapid clearance of spectators.

Tunnels

England—Work is nearing completion on the $600,000 cable tunnel under the Thames from Battersea Power Station to Chelsea Embankment. The 8 ft. dia. tunnel, 2,500 ft. long, was begun in September, 1947, to carry power cables to a new substation in Northwest London.

Alignment presented the principal problem because the shortest route would have brought the tunnel directly under one of the piers of the Victoria Railway bridge. For this reason the tunnel approaches midstream in a curve which brings it through the center span midway between the bridge piers, and once clear of the bridge, the tunnel again sweeps in a curve to the north bank.

Cast iron lined, the tunnel is 76 ft. below ground at the south bank and has a minimum clearance below the river bed of 16 ft.

Work has proceeded continuously in eight hour shifts, averaging 60 ft. of tunnel per week with a force of 25 men. Usual air pressure was 10 lb., but at one point, when driving through a pocket of sand, an increase to 28 lb. was necessary.

The tunnel was designed—and its construction supervised—by the engineering staff of the former London Power Co. Ltd. and, since April 1, 1948, by that of the London Division of the British Electricity Authority.

Railroads

Union of South Africa—During the next five years a total of $600,000,000 will be spent on South African railways, according to an official in Johannesburg. Main lines will be strengthened and straightened to permit heavier and faster traffic. Marshalling yards, stations, new rolling stock and increase in electrified line will be provided.

North British Locomotive Co. of Britain intends to erect works at Springs to build heavy locomotives for export to all parts of the world. About $4,000,000 will be spent on buildings at this plant.

Bridges

India—The largest bridge construction job in India, a $39,000,000 two-level structure across the Ganges near Patna in Bihar province, is just getting under way under direction of the Central Public Works Department. It will consist of 15 spans each 400 ft. long, providing a 40-ft. clearance for river traffic at flood levels.

A single-track rail line will occupy the lower level, and the auto highway will be 22 ft. above it. Earthfill approach ramps will extend for some 2 mi. on each side. Subsoil conditions will require bridge piers in some cases to be sunk as low as 150 ft. below low-water level.

Russia—The Soviet Union's first electric welded railway bridge has been produced by the Molotov structural steel works in Dnepropetrovsk; it is being put through performance tests under traffic loads. This application of welded design to bridge construction, first in the country, follows development of the country's first all-welded blast furnace. A program for mass production of welded-type structural steel for bridge building is now under way.

Industrial Construction

Australia—A high-vacuum still for production of lubricants and of road-surfacing bitumen will be built by the Shell Co. at Geelong, Victoria. The installation is estimated to cost $5,000,000 and it will take two years to complete.

Mexico—A recent survey has shown that this country has at last made herself more than self-sustaining in the production of cement. With a 2,000,000-ton production forecast for 1949, there will be no need to make costly imports of cement, and a comfortable surplus for export is anticipated.

Miscellany

Sweden—Rust chipping operations, which now hold valuable shipping tonnage idle in port for many weeks a year, may be eliminated in the future after the marketing of a new Swedish rust-removing compound, known as Corrosan. It dissolves rust without attacking the iron and, in an emulsion form, can be sprayed on large surfaces. An anti-corrosion compound is also manufactured for protective treatment after cleaning. The new method has already been adopted by many Swedish industrial concerns.

Australia—Paints that resist temperatures of 1,000 deg. F. have been developed by the Council for Scientific and Industrial Research. Basis of the new paint is butyl titanate, which is derived from Australia's "black sand" beach deposits.

In addition to its heat-resistant properties, the new paint provides superior protection against salt water corrosion.

TRACTOR DRAWN TRAINS plow through the vast, snowy wastes of northern Canada to bring supplies and essential parts to the new power development recently put into operation on the Snare River in the Canadian Northwest Territories.

New Canadian arctic hydro plant built under severe weather obstacles

Stepping up the industrial potential of the Canadian Arctic, a new hydroelectric light and power plant has gone into service at a site due north of the Yellowknife mining center in the Canadian Northwest Territories.

The installation is built on the Snare River, a tributary to the Great Slave Lake, and produces a rated capacity of 8,350 hp., and supplies the town of Yellowknife (population 4,000) and adjacent mining areas, over a 94 mile transmission line. It augments the output of an older plant at Blue Fish Lake, 25 miles from Yellowknife.

The isolation of the new site and the extremes of temperature (ranging from 60 deg. below zero to above 90 deg. in summer) imposed great obstacles upon the builders. However, the Dominion Department of Mines and Resources, which exercises political jurisdiction over the Northwest Territories, has announced that the Snare River power development is only the first of a number of hydro installations planned for the Territories to foster the expansion of mine operations and the creation of new industries.

Area rich in minerals

Gold, silver, and precious metals and both the primary and secondary uranium minerals are among the known deposits awaiting development in the area.

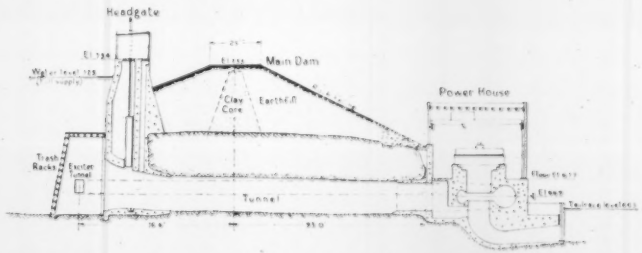
Since the region around Yellowknife lacks anything even resembling a continuous system of highways, construction and installation equipment had to be brought in from Canada proper and the United States by various means.

All emergency freight and much of the cement was brought in by airplane over a distance of 1,000 miles from Edmonton, Alta. The heavier items, such as generators and turbines, were moved in during the winter by tractor trains—a crawler-tractor hauling 28 sleds and a combination caboose, cook wagon and dining room for the crew—which were guided by scout planes. In summer, steamers and barges brought equipment as near to the site as possible. There were many necessary portages around cataracts, rapids and other unnavigable stretches of river or lake.

The new dam is an earthfill structure 800 ft. in length, with a maximum width at base of 420 ft., and a spillway dam 200 ft. long with flashboard support columns. Maximum height of the dam is 73 ft. The dam, with two retaining structures, forms a lake 30 square miles in area and 28 miles in length.

About 2,400 cu. yd. of concrete went into the construction of the power house, and more than 160,000 cu. yd. of clay, sand and rock went into the dam.

Consulting engineers for the project were the Montreal Engineering Co., of Montreal; consulting engineers for the transmission line was the Sutcliffe Co., Ltd., of New Liskeard, Ont.; general contractors were the Northern Construction-Mannix Companies, Ltd., of Edmonton, and the transmission line was built by the Giant Yellowknife Gold Mines, Ltd., of Yellowknife, for the Department of Mines and Resources.



SECTION through the Snare River dam and powerhouse shows construction features.

ANOTHER SERIES OF LAKES is added by the new dam to northwest Canada's vast water areas, as more power is manufactured for precious metal mining operations.

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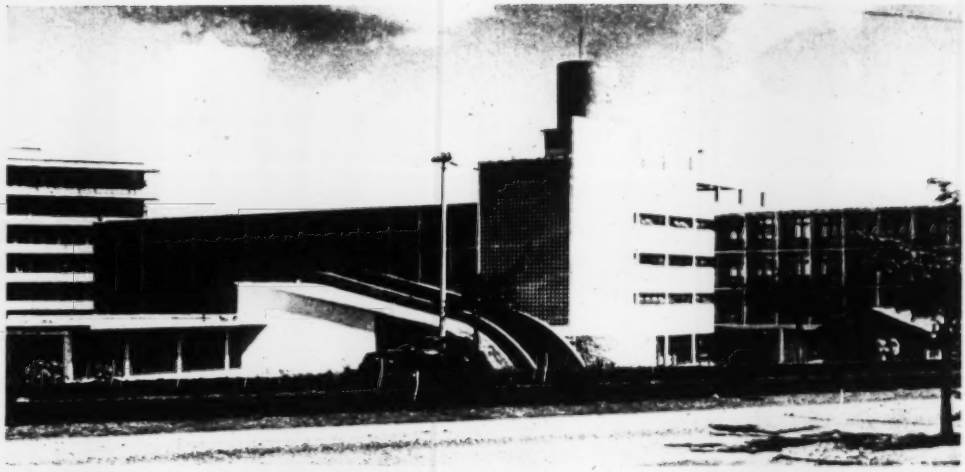


A NURSING SCHOOL for Sao Paulo, Brazil, includes comfortable living quarters to encourage enrollment.

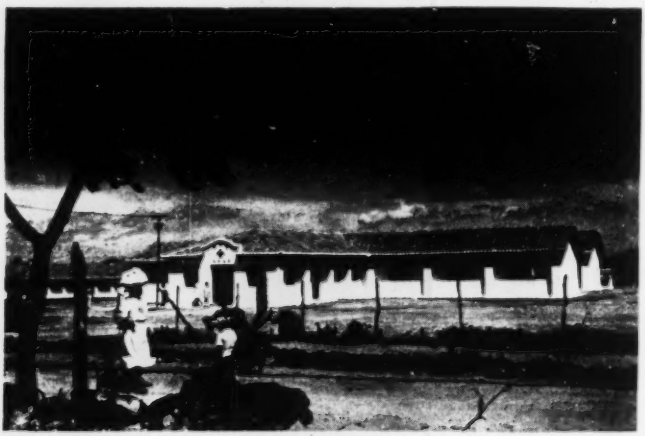
Unfamiliar problems face U. S. designers working on Latin-American hospitals

Iquitos, Peru (population 45,000), like many other Latin American cities, needed a hospital. Like the others, also, it found that building one was no easy task. The city is isolated beyond the high Andes in the Peruvian tropics. The climate is hot, and air-conditioning systems are much too expensive to import. Skilled workers are scarce. And the city has no water system.

Sao Paulo, Brazil, needed a nursing school. Brazil had only 700 graduate nurses for a population of 43,500,000 and an area of 3,386,000 sq. mi. Therefore, it was desirable that the school building be attractive in appearance and provide comfortable quarters to help induce more girls to study nursing. However, only limited funds were available.

Santa Isabel, a leper colony in Paraguay, established in 1933, needed modern facilities for medical care of the patients. It also needed a water system, a public laundry and bathing facilities, living quarters for the men who care for the patients, and improvements to the doctor's residence. But Santa Isabel is 10 kilometers from the town of Sapucay, the only connecting roads being nothing more than a trail in good weather, almost impassable in bad. The 100-kilometer trip from Asuncion to the colony requires several days, and only the most persistent and hardy would willingly undertake it.

Iquitos now has its hospital, Sao Paulo its nursing school, and Santa Isabel its new facilities; and in the process of providing them, techniques were developed that may be useful to other architects planning hospitals for tropical regions. These techniques are described in "Hospital Planning in Latin America," a 45-page illustrated pamphlet recently published by the Health and Sanitation Division of the Institute of Inter-American Affairs. The pamphlet can be obtained by writing to the headquarters of the institute at 499 Pennsylvania Ave., Washington 25, D. C.



THE HEALTH SERVICE HOSPITAL at Fortaleza, Brazil, has an overhanging roof to protect windows against direct rays of the sun. (All photos by I.I.A.A.)

Well established division

An agency of the United States Government, the health and sanitation division of the institute has been conducting cooperative programs in Latin American countries since 1942. In each country, the individual projects are executed through an Inter-American Cooperative Health Service set up within the national government for the purpose. At last reports, 83 projects had been undertaken for the construction or remodeling of hospitals; 17 hospitals were still under construction; 66 had been finished and placed in operation, and 5 new nursing schools had been started, of which three were completed and are in operation.

The pamphlet makes clear that while U. S. standards, to a large extent, may be applied to the design of tropical hospitals, the structures must be adapted to local conditions. Consideration must be given to such indigenous factors as climate, health and social problems, customs, local opinion, materials and labor.

Making nature work

Peter Pfisterer, who designed the hospital for Iquitos, is quoted as saying that a leading consideration for the architect planning for such a region is to "work" nature for all the air conditioning possible. Advantage should be taken of every air current by angling the most favored part of the hospital to catch the prevailing winds. Direct exposure of windows to the sun should be avoided, and cross ventilation should be provided near the ceiling. Construction based around a patio —a design that to northern eyes looks so ideal for hot climates—actually is less useful in point of securing comfort for the room than is construction in which wings are planned for maximum exposure.

In the hospital at Iquitos, the wing containing the patients' rooms is oriented toward the prevailing winds. Utility rooms in this wing are located on the less favored side.

The hospital has a wide projecting roof to protect windows from direct rays of the sun, and wooden shutters with wide panels permit ventilation, but shut out direct sunlight. Openings close to the ceiling add to the cross ventilation. For traffic between buildings, open covered walks are used instead of closed passages.

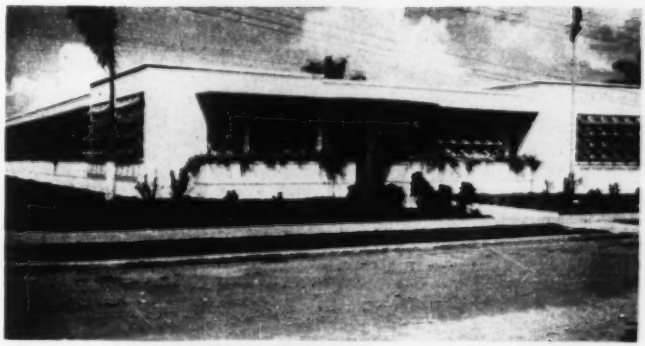
Maximum use was made of local materials for construction. Cedar and mahogany were used for roofs, doors and floors, but most floors are of concrete. Walls are of hollow brick.

About 31,800 sq. ft. of floor was provided in the one-story building at a cost of $265,610. An average flow of 200 patients a day can be handled in the out-patient department.

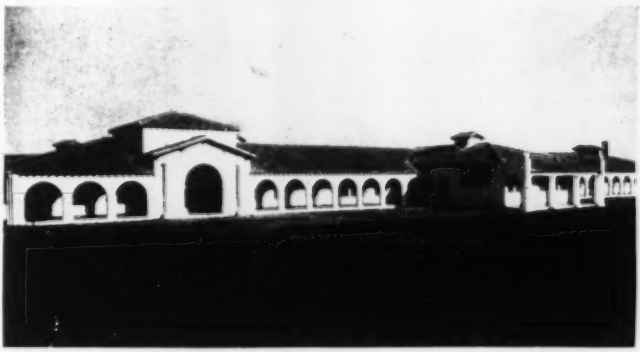
School designed to draw students

The Sao Paulo School of Nursing is located across the street from the medical school of the University of Sao Paulo and adjacent to the Hospital das Clinicas. Providing facilities for 200 student nurses and office space and living quarters for the administrative staff and the faculty, the building is of reinforced concrete.

Nearly all bedrooms in the two residential wings are single, and all have balconies. Both wings have east and west exposures, and every room gets the sun part of the day, an important consideration in Sao Paulo, where heating systems are uncommon and cold weather not unusual. A playroom is provided in the basement and three recreational areas on the roof.



THE HEALTH LABORATORY at Ciudad Trujillo, Dominican Republic, takes advantage of prevailing breezes to ventilate the interior.



THE TUBERCULOSIS SANATORIUM at Asuncion, Paraguay, utilizes open, covered walks instead of closed passages.

The school has a floor area of about 59,200 sq. ft. Cost of construction was $400,000 and equipment for the building cost $150,000.

Maximum use made of local skills

At Santa Isabel, the nature of the construction was dictated largely by the difficult transportation to the leper colony and the lack of skilled labor. The work had to be simple. Local materials had to be used, and maintenance had to be kept easy.

The hospital consists of four one-story buildings around a central unpaved patio. Foundations and walls to window level were constructed of field stone, which was plentiful. Roofs are tile. Floors and upper portions of walls are of brick made by the patients in a plant specially constructed for this project. And except for doors and windows, wood used in the construction was cut from trees on the property adjoining the hospital.

One of the most difficult problems was how to provide the 11,300 sq. ft. of floor area with a surface that is easily cleaned. Trained concrete finishers were lacking, and bad transportation prohibited the bringing in of cement tile in sufficient quantity.

Here is how it was solved: A layer of brick was laid flat directly on the tamped earth and topped by 1½ in. of cement mortar with a color admixture on the top ¼ in. The surface was screeded and floated with a wooden float, and the final finish given with a rubber-covered float. Cast in forms made up of steel channel sections, the slabs are 10 ft. square, separated by ½-in. asphalt-filled joints.

Other factors that the pamphlet calls particular attention to are that construction, where possible, has been mainly of reinforced concrete, with emphasis on earthquake resistance. Imported equipment is expensive, so that unnecessary items must be omitted. For example, laundry tubs may have to be substituted for washing machines, which are too expensive to buy.

ENGINEERING SCHOOLS

Young Engineers

A survey of 135 recent Stanford University engineering graduates has brought out interesting facts concerning employment of young engineers.

A third of the graduates (51) are working in manufacturing; 28 in government work, reflecting the result of increasing federal research and California's vast bridge and highway construction program; 23 are employed by consulting firms or educational institutions.

Fifty percent of the employed group is engaged in technical phases of engineering, with one-fourth of them doing research and development work.

If they have a master's degree, they receive on the average $36 a month more than graduates with bachelor's degrees; an additional $39 if they have the degree of engineer; and still $34 more if they have a Ph.D. in engineering.

On the bachelor degree level, civil engineers, with an average of $290 a month for their first year's work, led the other branches by a considerable margin. In the master's degree group, graduates in electronics topped the rest of the M.S. field, with an average monthly salary of $328.

The survey also indicated that engineering graduates have a 25 percent chance of getting a raise after three months; a 75 percent chance after six months; and after nine months, they are almost certain to have received at least one pay increase. Sixty-four reported that they got their jobs with university assistance.

Traffic Training

First of three regional traffic training institutes, intended to expand the "in-service" traffic training program, was held Jan. 31 to Feb. 11, at the University of California, Berkeley. The western institute is sponsored jointly by the university's newly organized Institute of Transportation and Traffic Engineering and the National Committee for Traffic Training.

Twenty-five men from all branches of the Army in the United States, plus others from overseas, will attend an 8-week vehicle traffic regulation course March 28 to May 20 at the Traffic Institute, Northwestern University, Evanston, Ill.

First of its type to be presented by a non-Army organization, the new course is an addition to the present 4-week military traffic control courses offered at the institute twice a year for Army officers and safety personnel. Training will be under the general supervision of the director of personnel and administration, General Staff (U. S. Army safety director).

New Courses

An educational experiment whose goal is to raise the standards of Alabama's engineers and land surveyors has been inaugurated by the University of Alabama extension division. A campaign for higher standards among Alabama engineers and surveyors was started in 1935 when they were required to be registered before they were recognized on a professional basis.

The school of public health at the University of Michigan, on March 14-15, will offer the first in-service training course in selected technical problems in sewage and industrial waste disposal.

Educational Notes

A Stephens-Adamason Foundation scholarship fund has been established to help deserving students in civil and mechanical engineering at the Illinois Institute of Technology.

Winter quarter registration at Georgia Tech is 6,441 while enrollment in the department of engineering at the University of Virginia has grown from 150 in 1935 to 600 in 1949.

The Kentucky Department of Highways is offering scholarship opportunities at the college of engineering, University of Kentucky. Each year 18 student engineering employees will be chosen by competitive examination from the nine highway districts. Each student will get $60 a month while at college. About June 1 he will be transferred to field, office or laboratory work on a full-time, full pay basis.

Construction of the projected engineering building at Vanderbilt University, Nashville, Tenn., will begin this spring.

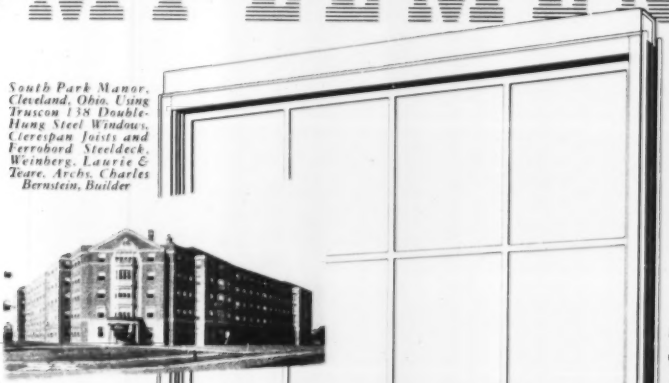
A division of engineering mechanics has been established in the school of engineering at Stanford University, Calif. Dean Frederick E. Terman has appointed an executive committee of faculty members to administer the new division, consisting of Stephen P. Timoshenko, chairman, and James N. Goodier, Donovan H. Young and Lydik S. Jacobsen.

Columbia University is offering courses in basic and advanced estimating, designed for estimators in the building construction field. The subjects include material determination, quantitative surveys by materials and trades, cost records, pricing of work, sub-contractors and comparative economics of various materials and structural systems.

Ladis Csanyi, will be added to the Iowa State College's division of engineering as a professor in civil engineering. His specialty is highway engineering. He is a graduate of Brooklyn Polytechnic Institute and has been a consulting engineer with Edwards and Kelsey, Jamaica, N. Y.

HEALTH SCIENCES CENTER—This $9,000,000 structure—one of the largest building projects in the Northwest—is scheduled for September completion at the University of Washington in Seattle. It will house medical and dental clinics, laboratories, a library, an auditorium and offices.

COMPLEMENT



South Park Manor, Cleveland, Ohio. Using Truscon 138 Double-Hung Steel Windows, Clerespan Joists and Ferrobord Steeldeck. Weinberg, Laurie & Teare, Archs. Charles Bernstein, Builder

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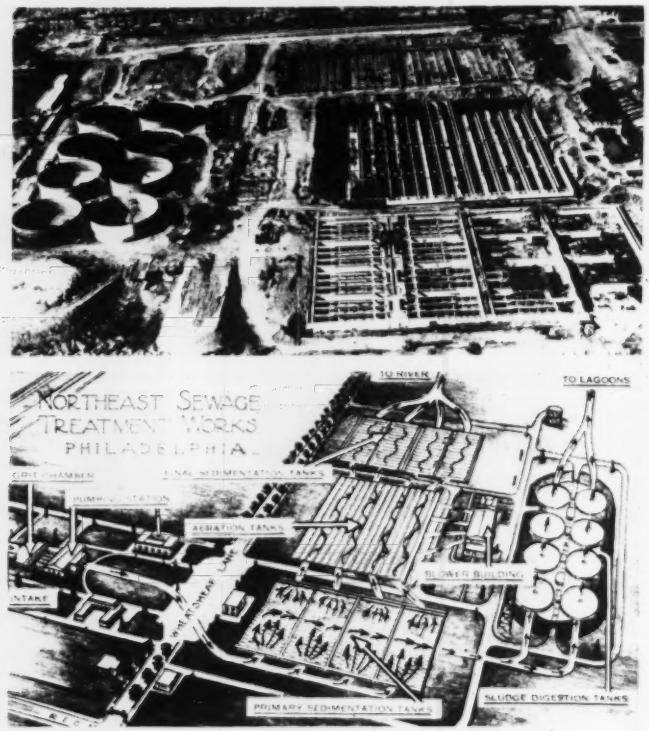

NEARING COMPLETION—Comparison of the flow diagram and aerial photo of Philadelphia's Northeast sewage treatment works shows the project more than 70 percent completed. Construction on the $8,500,000 project was started in 1947. Capacity of the plant is to be 125 mgd.

Work is well under way on the construction of sewage treatment plants and improvements of the water system of Philadelphia, Pa. The total cost of the sewer project is set at $71,597,000 and improvements to the water system at $37,979,000—a total of $109,576,000.

Progress reports made public by Thomas Buckley, public works director; A. Zane Hoffman, principal engineer, and Samuel Baxter, principal assistant engineer, show that construction of the Northeast Sewage Treatment Works at Wheatsheff Lane and Richmond St. is about 70 percent finished and should be completed by the spring of 1950. That plant will treat sewage from the part of the city lying northeast of Allegheny Ave. It was first started to assist in the reduction of the pollution of the Delaware River from which the city draws half its household water supply.

Work on the building of the Southeast treatment works at Swanson St. and Packer Ave. on the Delaware River was started last November and is expected to be partially completed in 1951 and fully completed by 1952.

Actual construction on a third treatment works on land owned by the city near the International Airport will begin this spring, with preliminary work already under way. It is estimated that this plant will be partially completed in 1951 and ready for full operation in 1953.

The sewage treatment program also entails construction of intercepting sewers to collect all of the city's sewage and convey it to the three plants.

Water program

The water improvement program under the supervision of Elbert Taylor, chief of the water bureau, includes the new ozone plant at the Belmont Pumping Station, one of the largest such plants in the world. It is scheduled to begin operations within the next three to six months. Also included is the installation of temporary carbon feeding facilities at the Torresdale pumping station and a new filtered pumping station; a new filtered pumping station at Fox Chase; a new chlorine house at East Lane reservoir, and new filter equipment at Queen Lane station. Many new pipe lines for residential areas are under way. Contracts totaling nearly $5,000,000 have been let on this program, the official reports show.

N. Y. Port Development

A $30,000,000 program for the rehabilitation of two New Jersey components of the Port of New York was submitted to the New Jersey and New York legislatures last week by the bi-state Port of New York Authority.

The voluminous report was presented simultaneously to Governors Alfred E. Driscoll of New Jersey and Thomas E. Dewey of New York for approval and transmission to legislators. It covers the rehabilitation of federally-owned piers in Hoboken, and construction of a new marine terminal in Jersey City.

Entrance of the port authority into these two parts of the greater port of New York would be another step in a major port development program. The authority has already taken over (on a lease basis) the docking facilities of the Port of Newark, and all four major airports in the metropolitan area. It has also proposed that it lease, operate and rehabilitate a large share of the hundreds of docks owned by the city of New York.

The authority's proposal—based on a general survey of the New York harbor and lower Hudson River area (including tributary streams)—proposes construction of a $13,000,000, two-pier marine terminal at the southern end of the Jersey City waterfront; and restoration of four piers owned by the federal government at Hoboken, which were partially destroyed by fire some years ago. The Hoboken work would cost $17,000,000.

Also proposed is the taking over a large part of the Bayonne, N. J., naval base for use as a commercial marine terminal.

Municipal Briefs

A new city hall is being considered for **Miami, Fla.** One plan is to make it a revenue-producing structure with stores on the ground floor. It is estimated that such a building would cost between $1,000,000 and $1,500,000.

Efforts of the city of **Camden, N. J.**, and of some of its industries to postpone construction of its sewage

collection and treatment project has brought forth vigorous opposition from Incodel, Philadelphia officials, and officials of other cities and towns along the Delaware River immediately north and all the way south to Delaware Bay. Officials of the municipalities point out that if Camden is allowed to postpone its project that would to a certain degree nullify the good that all the other projects will do, and in any event prevent a 100 percent cleanup of the river's sewage problem.

A $3,000,000 appropriation by Delaware to pay half the cost of sewage treatment plants which must be built in the northern end of the state has been proposed to the committee on the proposed **Wilmington** sewage disposal system. State aid, and the creation of the New Castle Sanitation Authority to plan, build and operate a coordinated sewage disposal system were proposed by the sub-committee on legislation. The state aid would be applied directly to the cost of the treatment plants, while the proposed sanitation authority would bear the full expense of the intereceptor sewers which would cost about the same as the treatment plants. Construction of sewage disposal plants in the Wilmington area is required by a state law adopted in 1941 to provide for Delaware participation in an interstate program "to preserve in a safe and sanitary condition the waters and watershed of the Delaware River Basin."

The **Terre Haute**, Ind., city council has under consideration an ordinance authorizing installation of approximately 1,000 parking meters at an estimated cost of between $60,000 and $70,000, according to City Engineer Albert Ellis. Funds derived from the meters would be used for repair of city streets and for other public uses. The city is to develop a traffic engineering department.

Contracts for $6.8 million cancelled in Tennessee

Tennessee Highway Commissioner E. W. Eggleston has announced rejection of 11 road contracts involving $6,818,850 (ENR Feb. 3, p. 52). Announcement came after an all-day conference with road builders last week.

Mr. Eggleston, named commissioner in January by Gov. Gordon Browning, said the highway department was over let by $5,000,000 when the former state administration of Gov. J. McCord let the contracts.

In some cases contractors involved in the 11 rejected contracts have signed voluntarily terminating waivers. Others are to inform the department later.

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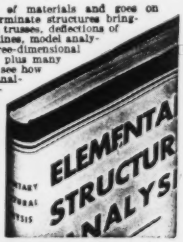

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11. Cables
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13. Deflections of Structures
14. Stress Analysis of Indeterminate Structures
15. Influence Lines for Statically Indeterminate Structures
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17. Model Analysis of Structures
18. Model Methods of Stress Analysis
19. Other Uses of Structural Models

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MEN AND JOBS

Col. John R. Hardin, district engineer at New Orleans, La., is serving as acting division engineer of the Lower Mississippi Valley division on temporary appointment pending the appointment of a new president of the Mississippi River Commission to succeed Maj. Gen. Robt. W. Crawford, retired.

Bellman, Gillett & Richards, Toledo, Ohio, architects and engineers, have admitted **Michael B. O'Shea** and **George H. Erard** to full partnerships. **Donald L. Todd,** structural engineer, and **Robert C. Moorhead,** mechanical engineer, have been named associate partners, replacing Mr. O'Shea and Mr. Erard. **Lawrence S. Bellman,** with the firm more than 50 years, has retired.

Burton R. MacRitchie, Toledo, Ohio, city division engineer, has been named city engineering commissioner, succeeding **Arnold V. Finch,** now city manager. The latter replaced **George M. Schoonmaker,** resigned. **Porter W. McDonnell** has been named service director, succeeding **John H. Jewhurst.** Mr. McDonnell has been a member of the City-County Plan Commission seven years, and was associated with Shortridge Hardesty, New York bridge designer and engineer, on the construction of the Anthony Wayne bridge and the survey for the new Fassett St. Bridge in Toledo. **John H. Davis,** assistant division engineer, was named commissioner of harbors and bridges, succeeding **Thomas Reeves.** The latter will take charge of the sidewalk section of the engineering division, replacing the late **Fred Millard. John W. Klag** was appointed street commissioner, replacing **Harry M. Loucke.**

Edmund N. Bacon is executive director of the City Planning Commission of Philadelphia, Pa. He has been chief of the land planning division of the planning commission for seven months, prior to which he was senior land planner. A graduate of Cornell University College of Architecture in 1932, he worked with architects Oskar Stonorov and W. Pope Barney, Philadelphia, as well as with a firm in Shanghai, China.

MacKenzie Randolph Campbell is general superintendent for Richard and B. A. Ryan, Ltd., general contractors, Montreal, Que., and Belleville and Toronto, Ont.

S. J. Martenet & Co., surveyors and civil engineers established 100 years ago in Baltimore, Md., is now being continued by **Robert B. Sutton, Howard D. Tustin, Jr.,** and **Richard P. Tustin** who have been associated with the firm for a number of years as principal assistants.

Lt. Comdr. R. C. Bolstad, in charge of a U. S. Coast and Geodetic Survey

Attending the recent annual conference on water and sewage held by the Office of Chief of Engineers at Baltimore, Md., are these sanitary engineers in the Regular Army Medical Department: Front row, left to right—Maj. Oscar Adams, Office of the Surgeon General; Lt. Col. F. H. Whitley, Headquarters First Army, Governors Island, N. Y.; Lt. Col. Ralph Cleland, N. Y., Port of Embarkation; Maj. Clyde Turner, Engineers School, Fort Belvoir; and Maj. Frank Lord, Office of the Air Surgeon. Back row, left to right—Capt. Marlo Smith, Army Medical Center, Fort Totten, N. Y.; Maj. R. J. Karpen, 1st Lt. T. B. Ostrom, Office of the Surgeon General; Capt. C. R. Lewis, Headquarters Second Army, Fort George Meade, Md.; and Capt. J. M. Ramos, Industrial Hygiene Laboratory, Army Medical Center, Md.

S. B. Barnes, Los Angeles structural engineer, presiding at the sessions of the recent convention of the Structural Engineers Association of California.

field party at Statesville, N. C., has been transferred to Fayetteville, N. C.

Samuel P. McBridge, of Sharon, Pa., has been appointed senior sanitary engineer for the Pennsylvania Department of Health.

E. Burton Hughes, who studied at Rensselaer Polytechnic Institute, is now director of the bureau of rights-of-way and claims of the New York State Department of Public Works.

H. W. Haner has opened a consulting and design service at 900 Guardian Bldg., Portland 4, Ore., to specialize in municipal, water and sewage works, structural engineering, bridges and buildings.

Assistant district highway engineers in Kentucky just appointed include: **Jack Carson,** Paducah; **Wm. Burton,** Louisville; **H. R. Ditto,** Elizabethtown; **Jack Carr,** Covington; **L. A. Whitmer,** Lexington, and **John Spurrier,** Flemingsburg.

A. N. Aitken, retiring city engineer of Erie, Pa., has been appointed an engineering consultant for the city to draw up a master plan for the sewer system. **Fred Gorenflo,** assistant, becomes city engineer. Aitken will prepare plans to carry out the streets department's $1,106,000 sewer improvement bond issue approved in November. Probably he also will represent the city when work begins on a $6,000,000 coal dock planned for Erie harbor by the Pennsylvania Railroad.

J. C. Lucien Trempe, civil engineer, has been named town manager of Ste. Agathe, Que.

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OBITUARY

Philip Harrington, 63, chairman of the Chicago Transit Board, died in West Palm Beach, Fla., Feb. 11. He was graduated from Armour Institute in 1906. He became chief engineer of the Chicago Sanitary District in 1933, and was named commissioner of subways and traction in 1938. The duties of superhighway chief were added in 1940. During his 29 years with the sanitary district he directed the design and construction of more than $100,000,000 of tunnels and sewage disposal works in the Chicago district.

Newbern Robert Watkins, 49, post engineer at Fort Bragg, N. C., and formerly engineer with the North Carolina State Highway Department, died Feb. 10.

Fred Ross Muns, 76, retired president of the San Francisco Bridge Co., who helped design many large bridges throughout the United States, died Feb. 9.

William Monroe White, 77, hydraulic engineer, died Feb. 9 at Coral Gables, Fla. He assisted in the design and construction of many hydro-electric installations, including those at Niagara Falls. He was for 32 years chief engineer and manager of the hydraulic department of Allis-Chalmers Mfg. Co., Milwaukee, Wis., serving from 1911 to 1943.

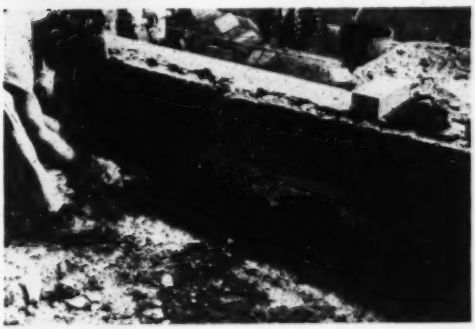
Tom Seaman, 91, died at Edrans, Man., Feb. 7. He constructed the first sewerage system in Winnipeg in 1883.

Charles J. Pollard, 58, owner of Ellsworth, Barrows & Pollard, Buffalo, N. Y., valuation engineers and surveyors, died Feb. 11. He received his engineering degree from Harvard in 1918, and joined the engineering firm as a partner in 1921, and became sole owner after the death of his two partners.

Walter P. Smyth, 53, a civil engineer in Wyoming for the last 25 years, died Jan. 30. Following his graduation from the University of Wyoming in 1922, he worked successively for the Union Pacific Railroad and the Producers and Refiners Corp., of Parco, Wyo., advancing to chief engineer in 1927. In 1933 he was appointed Carey Act engineer for Wyoming and, four years later, joined the Agricultural Adjustment Administration as state field engineer. At the time of his death, Mr. Smyth was state engi-

Keep Moisture at Bay... the Flintkote Way

Flintkote Mastic being applied to the inside surface of cinder-concrete masonry wall. Wall is coated from floor to ceiling.



Mastic being applied to inside wall along floor and above spandrel beam. Projecting spandrel cloth is then bent up into mastic, and more material is spread over it.

Flintkote Spandrel Cloth protects beam from moisture which might penetrate the brick or mortar joints.

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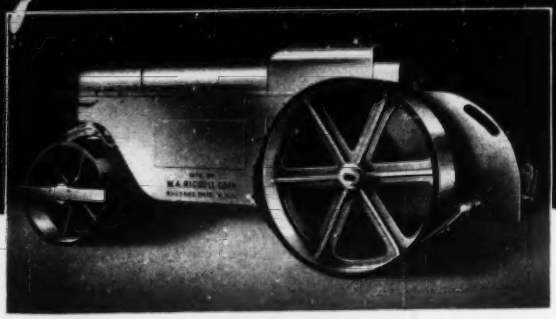

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- Easy to Operate and Steer
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Model No.	Description	
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10G54	10-Ton Roller, Waukesha Gas	54 HP
12D51	12-Ton Roller, Waukesha Diesel	51 HP
12G54	12-Ton Roller, Waukesha Gas	54 HP
12D51-WB	12-Ton Roller, Waukesha Diesel (20" WATER-BALLAST Front and Rear Rolls)	51 HP
12G54-WB	12-Ton Roller, Waukesha Gas (20" WATER-BALLAST Front and Rear Rolls)	54 HP

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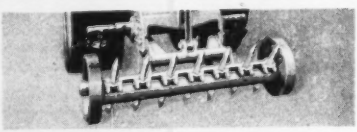
The depth of cut of the HERCULES scarifier is regulated by a specially designed tooth bar supported at each end by gauge wheels. The scarifier is hydraulically controlled.



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neer for the Production Marketing Association, with headquarters at Casper, Wyo.

Samuel Warren McLeskey, 64, civil engineer, died at Memphis, Tenn., Feb. 3. He was a graduate of the University of Alabama. He moved to Memphis in 1906. Much of his work had been in northern Mississippi on drainage projects and roads. He headed his own firm, and was long official surveyor of Shelby County.

William Ernest Jenkins, 64, president and general manager of Columbia Bitulithic Ltd., died recently at Vancouver, B. C. Well known in road and airport construction, he went to Vancouver from California in 1921 as a member of Warren Bros., Co. of Cambridge, Mass., of which Columbia Bitulithic is a subsidiary. He was with the organization 36 years. During the war he supervised construction of runways and taxi-strips at Vancouver International Airport under Department of Transport engineers.

Joseph Vincent Walsh, 57, who worked with the Interstate Commerce Commission as a civil engineer doing railroad valuation work for several years, died Jan. 31 in Washington, D. C. He was a graduate of Georgetown University, and of the Massachusetts Institute of Technology, 1913.

Bernard A. Klein, died Feb. 9, in Kingston, Pa. He served in the Navy during World War I, following which he was graduated from Pennsylvania State College School of Engineering. He spent his entire career in Army Engineer construction work, specializing in dams, bridges, flood control work, sewers and sewage disposal and highways. For the last 13 years he was with the B. G. Coon Construction Co. of Luzerne, Pa. At the time of his death he was vice-president and general superintendent in charge of all construction work.

Robert S. Hodgson, 43, Cary, Ill., president of the Central Construction and Engineering Corp., Chicago, died Jan. 9.

John Foss Plow, 49, of Charles Warnock & Co., Ltd., inspecting engineer, Toronto, Ont., died Feb. 2.

Wilford A. Thompson, 70, a former assistant city engineer for East St. Louis, Ill., died Jan. 29 in North Little Rock, Ark. He was a graduate of George Washington University. He was St. Clair County surveyor from 1908 to 1916, and served in the first world war.

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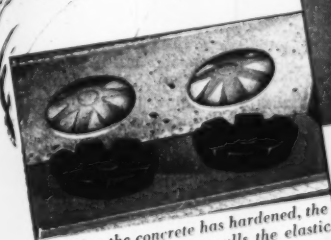
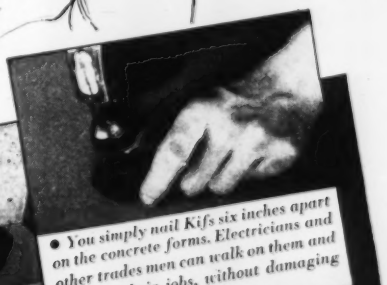
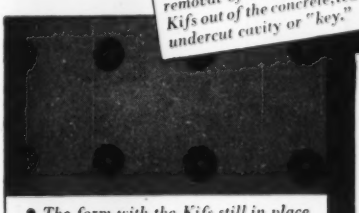
BOND PLASTER PERMANENTLY TO CONCRETE



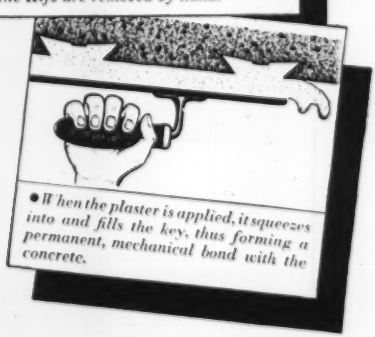
• *After the concrete has hardened, the removal of the forms pulls the elastic Kifs out of the concrete, leaving a clean, undercut cavity or "key."*



• *You simply nail Kifs six inches apart on the concrete forms. Electricians and other trades men can walk on them and perform their jobs, without damaging them.*



• *The form with the Kifs still in place then is ready for re-use for the next pouring shift. After the job is completed, the Kifs are removed by hand.*



• *When the plaster is applied, it squeezes into and fills the key, thus forming a permanent, mechanical bond with the concrete.*

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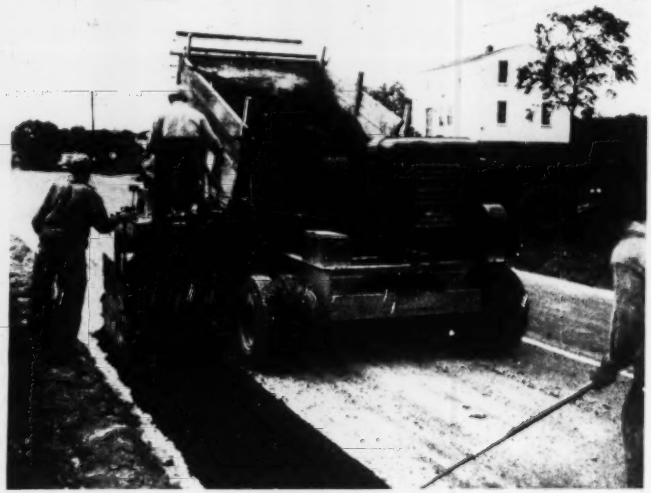


Rapid Road Widener

In the picture above the project ends just beyond position of widener. The contractor reports that immediately after the end of the strip was finished, the widener was changed over in about 30 minutes to begin laying stone on opposite side of the road where trench had already been prepared. One-way traffic was maintained throughout this improvement.—ALL PURPOSE SPREADER CO., ELYRIA, Ohio.

Cable-controlled Scraper

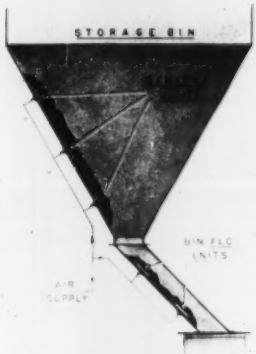
Three new models of cable-controlled earth-moving equipment are in production. Offering a wide, unobstructed front apron opening of 60 in., the new scrapers feature rear-draft fulcrum leverage and pivot-tilt bowl to assure faster, more efficient loading and dumping of greater volume. The BB-85 has a capacity of 8.5 cu. yds. struck and 11.0 cu. yds. heaped, while the BB-120 carries 12.0 cu. yds. struck and 14.2 cu yds. heaped. Other engineering advances include higher yoke clearance and greater ruggedness throughout. Cable is easily accessible, reeved in straight lines without reverse bends for increased life and easy replacement. Shorter wheelbase insures quick turning in crowded quarters. All sheaves are mounted away from dirt and load.—WOOLDRIDGE MFG. CO., SUNNYVALE, CALIF.

Non-freezing Hydrant

A frost-proof hydrant, eliminating the need for underground pits, gravel boxes, drainage tiles, sump pumps, special insulation, and electric heating coils has been introduced. The key to the design is a patented rubber-lined riser spout, inside of which is a rubber tube. When the valve is opened the water flows through this tube. With water pressure turned on, the tube expands against the inside of the riser-spout, allowing a full column of water to flow. As soon as pressure is turned off, the rubber tubing, installed under tension, contracts. The thin column of water freezes down to the frost line. Whenever the valve is opened, water pressure again expands the tubing, and water flows up and around the "pencil" of ice. The ice breaks up and flushes out with the water, giving a free-flowing stream almost instantly—CRANE CO., 836 S. MICHIGAN AVE., CHICAGO 5, ILL.

Industrial Seismograph

A portable "seismograph" to analyze vibrations with frequencies as low as two cycles per second has been developed by Electric Corporation, Baltimore, Md., and the Barry Corporation of Cambridge. Heart of the new instrument is the Westinghouse Vibrograph which, mounted in the Barry frame, answers the need for a quick simple means of recording vibration even when no steady reference point is available. It can be used to analyze the vibration effects of heavy machinery on factory walls.—WESTINGHOUSE ELECTRIC CORP., BALTIMORE, MD.,



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Bin-Flo is a new aerating device to provide uniform and steady flow of bulk materials from bins, hoppers and chutes. Device is a small plate readily located at points where flow is restricted. Low-pressure air is injected into the material through a special fabric diffuser causing material to flow freely.—BIN DICATOR CO., 14615 EAST JEFFERSON AVE., DETROIT 15, MICH.

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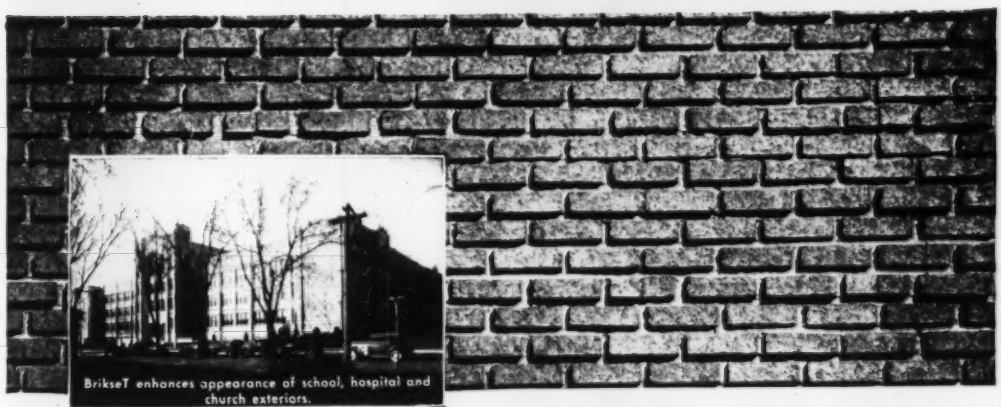

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This beautiful weathertight masonry wall shows the results of using Medusa BrikseT Masonry Cement. A "Job-Fitted" mortar cement, it makes a beautiful light gray mortar. BrikseT mortar contains a minimum of alkalies, thereby eliminating efflorescence caused by mortar. You can't top BrikseT mortar for bonding power as it completely contacts the masonry units and resists contraction and expansion. Minimum shrinkage during hardening prevents separation cracks between mortar and units. The strength of BrikseT mortar surpasses Government specification S.S.-C.-181 b.

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Medusa BrikseT is not only uniform but it's "Job-Fitted." It has the qualities best suited to make mortar for laying brick, tile, stone, glass brick and other masonry units. Use Medusa BrikseT on your next contract and standardize on it for a uniform high quality mortar. *Order from your dealer today.*

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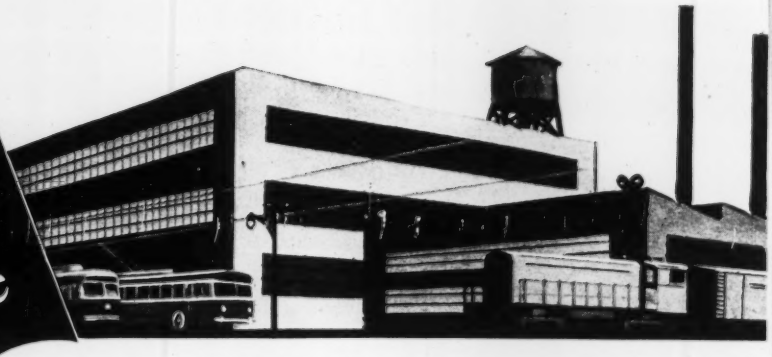

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BIDS ASKED

March 3

Ala., Demopolis—City, WW imprvs, $125,000. Plans deposit $10. Donald Mills, Box 534, Selma, engr. CD 12/15—ENR 1/1.

March 7

Kan., Cottonwood Falls—City Clk., City Hall, Part I, 17x22x22 ft., concrete, brick water softening plant, Part II automatic zeolite softening units, accessories, incl. brine pump, rinse water pump, chemical feed unit, piping, valves and gages. Plans deposit $10. Wilson & Co., 223 N. Santa Fe St., Salina, engrs.

March 8

Ark., Van Buren—City, 2 concrete reservoirs, for water sys., one 1½ mg. capacity and other 110,000 gal. capacity. Max Mehlburger, Pyramid Bldg., Little Rock, engr.

Ill., Belleville—Village of Marissa, Village Hall, Marissa, filtration plant imprvs, $50,000. James G. Cooney, 19 N. Illinois St., archt.

Tex., Farmers Branch—City, City Hall, water distr. sys., $50,000. Plans deposit $10. Joe J. Rady, 811 Insurance Bldg., Fort Worth, engr. CD 2/7/48—ENR 2/21/46.

March 10

Mass., New Bedford—Arthur N. Harriman, mayor, City Hall, intercepting sewer&Sr sys. addns., incl. 4 mi. S- to 21- in. gravity sewers, appurtenances, 2 sewage pump. stations, 800 ft. 12 in. force main sewers. Plans deposit $20. Fay, Spofford & Thorndike, 11 Beacon St., Boston, engrs. CD 1/9/48—ENR 1/22/48.

March 15

Tex., Beaumont—City, City Hall, pump. station, incl. pump. station piping unit, $125,000. Plans deposit $15. Freese & Nichols, 407 Dan-ciger Bldg., Fort Worth, engrs. CD 5/23/47.

March 29

Ky., New Port—City, City Hall, WW imprvs., incl. Contr. I, water treatment plant addns., extens.; Contr. II, filter equip., pumps, piping, valves; Contr. III, raw water pump. unit, Ohio River Pump Station; Contr. IV, cleaning force main from Ohio River Pump. Station to treatment plant, and two 20 in. transmission mains from treatment plant to point near intersection of 10 St. and Park Ave. Plans deposit $50. J. Stephet Watkins, 145 E. High St., Lexington, consult. engrs.

April 1

Tex., Littlefield—City, City Hall, WW sys. extens., imprvs. $200,000. Joe E. Ward, Nacol Bldg., Wichita Falls, consult. engr. Ralph W. Douglas, city engr. CD 1/6—ENR 1/20.

Bids Asked

Tex., Houston—San Jacinto Garden Apartments Corp., Box J, Zabilo, West Holdg., water and sanitary sewer lines in Odin Court, off LaSalette Dr., $65,000. Howard, Johnson & Kelley, Scanlan Bldg., engrs.

LOW BIDDERS

Md., Towson—Bd. Comrs. Baltimore Co., Court House, Feb. 7, 300,000 gal. elevated steel water tank, tower, appurtenances, Contr. 156W from Chicago Bridge & Iron Co., 1700 Walnut St., Phila., Pa., from 1 $17,700. CD 1/26—ENR 1/27.

Mass., Boston—Metropolitan Dist. Comm., 20 Somerset St., Feb. 10, furnishing, del. screens, gate valves, sluice gates, pressure reducing valves, pressure relieve valves, air valves, air-cocks, cone-boost Venturi meters and recorders, compound water meter and recorder, hydrant, water level recording gage, Chicopee Valley Aqueduct, Belchertown, Ware and Ludlow, Contr. 165, Group B, from Chapman Valve Mfg. Co., 165 Congress St., $57,929; Group D, from Pelton Water Wheel Div., Baldwin Locomotive Wks., 10 High St., $50,300. CD 1/26—ENR 2/3.

N. D., Maddock—City, Jan. 25, water distr., from Barbarossa & Sons, 402, 32 Ave. N., St. Cloud, Minn., $108,397. Lium & Burdick, Grand Forks, engrs.

Pa., Norristown—Dpt. Property & Supplies, Ix and Herr Sts., Harrisburg, project indefinitely postponed, mechanical and piping constr. for water supply sys. addns. at Norristown State Hospital. $100,000. CD 1/14—ENR 1/27.

Tex., Beaumont—City, water and service cl. mains, McFaddin Ave., 16 St. and Broadway, from Miller-Crawford Co., Grove St., Beaumont, $46,086. CD 12/21—ENR 12/23.

Tex., Houston—City, M. H. Westerman, secy., City Hall, Feb. 2, installing yard piping at Northeast Water Pumping Plant, from Viking Constr Co., 3014 Sumpter St., $146,670. CD 1/11—ENR 1/20.

Wash., Tacoma—City, City Hall, Feb. 7, 13 mi. water distr. mains in area bounded by N. 9 and 25 Sts., Huson and Alder Aves., from Burrows & Milone, 3215 South M St., $134,000. D. E. Morris, city engr.

†Alaska, Fairbanks—Alaska Railroad, Dpt. Interior, Anchorage, Jan. 27, elevated 50,000 gal. steel water tank, from Pittsburgh-Des Moines Steel Co., 558 1st Ave. S., Seattle, Wash., $39,650. CD 1/16—ENR 1/29.

CONTRACTS AWARDED

La., Morgan City—City, City Hall, Feb. 4, watermains, to Red River Constr. Co., 2212 Hollywood Ave., Shreveport, $56,800. Bids 2/4, awarded 2/7. CD 1/18—ENR 1/29.

La., Sulphur—Town, Town Hall, water treatment plant, to Bartley & Hinnings, 433 Gravier St., New Orleans, $57,873. Bids 2/8. CD 1/18—ENR 1/29.

Mo., Sheridan—City, Mrs. Fannie Wilson, clk., City Hall, water distr. sys., Schedule III, to P. P. Young Constr. Co., St. Joseph, $34,287.

Neb., Lincoln—City, City Hall, wells and pumps for Lincoln water supply, near Ashland, to Layne-Western Co., 1426 Commercial Ave., Omaha, $34,312. CD 9/27—ENR 10/14.

S. D., Yankton—City, City Hall, water softening plant, to Interstate Machine & Supply Co., 1008 Douglas St., Omaha, Neb., $46,000. Bids 1/10. CD 12/29—ENR 12/30.

Tex., Deer Park—Deer Park Independent School Dist., Deer Park, Feb. 8, water supply well, pump, unit, to McMasters & Pomeroy, 300 St. Charles St., Houston, $60,665. Harry D. Payne, 3908 Main St., Houston, engr.

Tex., Jasper—City, addnl. c.i. waterlines, force account, $50,000. CD 7/9.

Tex., Pampa—City, City Hall, imprv. city distr. sys., $165,000; 500,000 elevated storage tank, $78,000; chlorinators, $12,000; mains, valves, fire hydrants, etc. $75,000; development new wells, installing feeder lines, pump. station, ground storage and addnl. chlorinators, $265,000, own forces. Grand total $595,000. Roberts & Merrill, Panhandle, consult. engrs. Jack G. Pepin, city engr. CD 9/27.

Tex., Whitney—Lake Whitney Enterprises, c/o C. G. Murray, Whitney, waterlines, facilities, own forces. $40,000.

Wash., Bremerton—City, City Hall, 12,750 ft 2" to 12" in. steel pipe for water sys. extens., to American Pipe & Constr. Co., 518 N. E. Columbia Blvd., Portland, Ore., $93,787. Bids 2/8 E. S. Severance, city engr.

SEWERS, WASTE DISPOSAL

BIDS ASKED

March 3

Kan., Sterling—City, at office C. K. Cooke, city clk., City Hall, Part I, 1,500 cu. yd. dry and 900 cu. yd. wet earth excav., 550 cu. yd. rein.-con., 1,450 cu. yd. rotary distributor, filter rock, sewage pumps, Part II, trench and backfill, 10 manholes, 2 railroad crossings. Plans deposit $10. Wilson & Co., 223 N. Santa Fe St., Salina, engrs. CD 12/20—ENR 12/30.

March 7

Calif., Belvedere—City, City Hall, sewer lines, pumping and treatment work. Over $500,000. Plans deposit $20. Charles H. Lee, 55 Sutter St., San Francisco, engr. CD 11/18—ENR 12/9.

March 8

Colo., Wheat Ridge—Town, Wheat Ridge Sanitation Dist., Wheat Ridge, sewage disposal plant and sewer lines approx. 32½ mi. $900,000. Carroll H. Coberly, 1441 Welton St., Denver, archts. CD 2/11.

N. Y., New York—President Bronx Boro, 851 Grand Concourse, Zone 51, sewer, appurtenances in Bronx Park East between Pelham Parkway North and Burke Ave.

March 9

Calif., Larkspur—City, City Hall, sewer outflow and pump plant. Over $500,000. J. C. Oglesby, 1115 4 Ave., San Rafael, engr. CD 1/22—ENR 1/13.

March 10

Mass., New Bedford—City, Arthur N. Harriman, mayor, city hall, interceptor sewer incl. 4 mi. S- to 21-in. gravity sewers, 2 sewerage pump. stations 800 ft. 12 in. force main. Plans deposit $20. Fay, Spofford & Thorndike, 11 Beacon St., Boston, engrs. CD 11/22—ENR 11/25.

LOW BIDDERS

Md., Baltimore—Mayor & City Council, City Hall, Feb. 9, mechanical and electrical equip. in Brooklyn Sewage Pumping Station, Hanover St., near Chesapeake Ave., from Diesel Engine & Pump Service, Inc., 102 S. Calvert St., $171,829. CD 1/27—ENR 2/3.

Mass., Northbridge—Town, Bd. Water Comrs., Town Hall, Feb. 9, sewage treatment plant, from James A. Munroe & Son, 156 N. Washington St., North Attleboro, $65,900. CD 1/11—ENR 1/13.

Tex., Austin—City, G. M. Morgan, mgr., Feb. 9, sanitary sewers, Govalle Area, from Joe Bland Constr. Co., 4704 E. 1 St., $51,865. J. E. Motheral, 7410 McCall Rd., engr. CD 1/14/46—ENR 1/30/46.

Tex., Houston—City, Feb. 9, storm sewers, 2nd Sect., from Russ Mitchell, Inc., 5304 Old Spanish Trail, $118,719.

Wash., Spokane—City, City Hall, rejected bids Jan. 12, sewers in Division St., Sect. D, L. 28, $117,101. Will re-advertise. CD 1/20—ENR 1/27, under LB.

CONTRACTS AWARDED

Idaho, Buhl—City, City Hall, 9,861 ft. 18- and 21- in. vit. clay, or concrete trunk sewers, to Statewide Plumbing & Heating Co., 1706 N. Main St., Pocatello, $64,546. Est. $100,000. Bids 1/15. CD 12/16—ENR 12/30.

Tex. and Ark., Texarkana—Cities of Texarkana, Tex. and Texarkana, Ark., sewage disposal plant and outfall line to Shaw Constr. Co., Texarkana, Ark., $419,010. Est. $450,000. Bids 2/7. CD 1/18—ENR 1/29.

Tex., Jasper—City, addnl sanitary sewer lines, force account, $65,000. CD 7/9—ENR 7/22.

Tex., Whitney—Lake Whitney Enterprises, c/o C. G. Murray, Whitney, sanitary sewers, drainage, own forces. $65,000.

BRIDGES

LOW BIDDERS

Massachusetts—Commonwealth of Mass., Dpt. P. Wks., 100 Nashua St., Boston, Feb. 7, bridge approaches, James St., Worcester from Northern Constr. Co., Inc., 588 Essex St., Lawrence, $128,651.

Massachusetts—Mystic River Bridge Auth., E. A. Hrest, chn., 6 Beacon St., Boston, Feb. 2, toll booths, registering equip., accessories for 14 traffic lanes, Contr. 9 R, Chelsea and Charlestown, from Electronics Signal Co., 483 Wills Ave., Williston Park, N. Y., $153,000. Charles A. Maguire & Assoc., 46 Cornhill St., Boston, engrs. CD 1/13—ENR 1/29.

North Dakota—State Hy. Dpt., Bismarck, Feb. 11, structural, incidental 8,846 mi. State Hy. 22, Killdeer to Manning, Proj. F-266 (5), Dunn Co., from Rue Constr. Co., Bismarck, $62,126; underpass structures, air-entrained c. conc. and b. conc. 1,054 mi. State Hy. 14 in Foster, Proj. No. FAS(M-390 (10) McHenry Co., from Okes Constr. Co., E. 1501 1st Natl. Bank Bldg., St. Paul, Minn. $383,589. CD 1/27—ENR 2/3.

South Dakota—State Hy. Comm., Pierre, Feb. 8, one 82 ft. I-beam viaduct, approaches, Proj. No. WER 9 D, Perkins Co., from Dave Gustafson & Co., 502 E. 6 St., Sioux Falls, $64,714. CD 1/26.

Tenn., Chattanooga—City, City Hall, Feb. 8, repairing Walnut Street Bridge, from Lindsey-Davis Co., 401 N. Market St., $179,985. CD 12/31—ENR 1/6.

(Continued on page 36)

PROJECTS COVERED

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterways $25,000; other public works $50,000; industrial buildings $68,000; other buildings $250,000.

Classes of Construction

(Name in order of Listing)

Water Supply	Latin America
Sewers, Waste Disposal	Public Buildings
Bridges	Commercial Buildings
Streets & Roads	Industrial Buildings
Earthwork, Waterways	Unclassified

Stages Reported

PROPOSED WORK: Including appointment of engineers or architects.

BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR.

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Symbols and Abbreviations Include:

♦ Federal Government
● Project of $1,000,000 or over.
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

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BRIDGE TIES

AMERICAN CREOSOTING COMPANY
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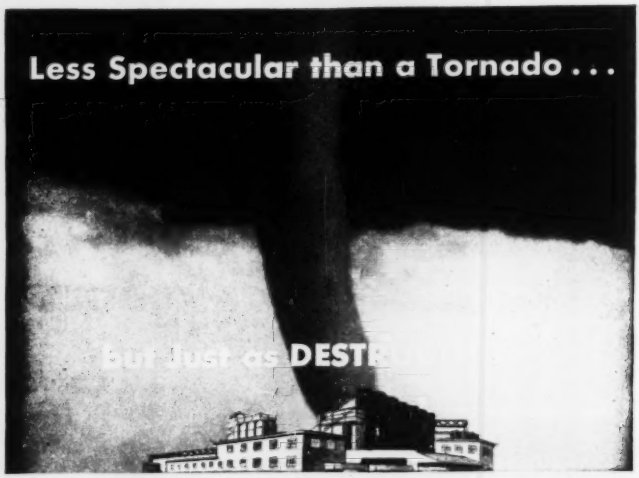
COLONIAL CREOSOTING COMPANY
GEORGIA CREOSOTING COMPANY
LOUISVILLE, KENTUCKY



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Day and night—*twenty-four hours a day*—rust gnaws at your property. Not as dramatic as a tornado or other fear-inspiring disaster, rust costs you plenty in a year's time. You pay your full share of the nation's annual $6 billion loss from rust . . . unless you protect iron and steel surfaces against this *metal-consuming* menace.

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(Continued from page 34)

CONTRACTS AWARDED

New York—Bureau Contracts & Accounts, Albany, 5 span structure carrying Indian Church Rd. and Harlem Ave. over Pennsylvania R. R., Erie Co., to H. F. Stimm, Inc., Ellicott Square, Buffalo, **$848,658.** Bids 10/13. CD 10/18—ENR 10/21, under LB.

STREETS AND ROADS

BIDS ASKED

March 4

Ind., Evansville—Bd. P. Wks., O. P. Wentzel, secy., City Hall, asph. bit., b. conc., and brick resurf. 20,000 sq. yd. or 30,000 sq. yd. various streets, $150,000. R. W. Meisinger, city engr. CD 8/22/45—ENR 9/6/45.

April 6

Ont., Woodstock—Bd. Wks., paving various streets, for Municipality, $85,000.

LOW BIDDERS

●**Louisana**—State Hy. Dpt., Baton Rouge, Feb. 9, from Barber Bros. Co., Box 629 Baton Rouge, bit. 9.551 mi. Paincourtville-Donaldsonville Hy., State Rt. 77, S. P. 407-08-03 and 407-09-03, Assumption and Ascension Parishes, **$286,158***bit. 7.5 mi. St. Jon Parish Line-Remy and Reserve Rd. Hys., State Rts. 1 and 1122, S. P. 256-03-11 and 256-30-03, St. James and St. John Parishes, **$88,594***bit. and timber trestle bridge repairs, 8.43 mi. Kentwood-Washington Parish Line Hy., State Rt. 71 S. P. 263-04-05, Tangipahoa Parish, **$165,450***from T. L. James & Co. Inc., Ruston, c. conc. 2.758 mi. Red River Bridge approaches (Moncla), State Rt. 57, War Emergency Relief Proj. No. WER FAS 1 (1), S. P. 33-03-10 and 33-02-08, Avoyelles Parish, **$233,565***bit. 8.7 mi. Lonewood-Mooringsport Hy., State Rt. 994 S. P. 48-03-03, Caddo Parish, **$167,594***bit., rein.-con. deck girder bridges, 10.32 mi. Oakdale-Vidrine Hy., State Rt. 22, S. P. 66-06-07, Evangeline Parish, **$293,319***from LeBlanc Bros. 702 Louisiana National Bank Bldg., Baton Rouge, bit. 17.4 mi. Remy-Ascension Parish Line Hy., State Rt. 1, S. P. 256-04-09, and 256-05-07, St. James Parish, **$222,991***from Stevens & Co., Whitney Bldg., New Orleans, bit. 5.45 mi. North Bend—Bayou Sale Hy., State Rt. 60, S. P. 243-02-10, St. Mary Parish, **$133,761.** CD 1/11—ENR 1/13.

North Dakota—State Hy. Dpt., Bismarck, Feb. 11, grav. 8.816 mi. State Hy. 22, Kildeer to Manning, Proj. No. F-266 (5), Dunn Co., from Archie Campbell, Warwick, **$151,825***grav. 15.332 mi. U. S. Hy. 83, Strasburg to North Dakota-South Dakota State Line, Proj. No. F-663 (7), Emmons Co., from Schultz & Lindsay Constr. Co., Fargo, **$204,194***b. conc. 19.934 mi. State Hy. 25, Hanover North and Stanton West, Proj. F-686 (2), F-235 (12) and S-135 (2), Mercer and Oliver Counties, from Northwestern Eng. Co., Rapid City, S. D., **$455,952.** CD 1/27—ENR 2/3.

CONTRACTS AWARDED

●**South Dakota**—State Hy. Comn., Pierre, grading 9.054 mi. Proj. F 267 (9) and 8.448 mi. Proj. FAS 194 (8), Hand Co., to C. A. Wagner Const. Co., 230 E. 8 St., Sioux Falls, **$132,527** and **$60,337** respectively***base course 15.528 mi. F 181 (26), Dewey Co., to Summit Constr. Co., Rapid City, **$308,199***base course 12.799 mi. F 116 (5), Hutchinson Co., to J. H. Lindekugel & Sons, Spencer, **$205,423***base course 12.664 mi. F 142 (4) and F 142 (3), Marshall and Brown Counties, to P. A. Bradbury Constr. Co., Aberdeen, **$203,400***base course 7.526 mi. F 257 (5), Pennington Co., to Dean R. Rounds, Rapid City, **$147,965.** Grand total $1,147,851. Bids 2/8. CD 1/26.

Tex., Columbus—Colorado Co. Courthouse, all weather road constr. & improvs., eastern part of county, **$70,000**; western part of county, **$65,000**, force account. CD 7/22/47 — ENR 8/7/47.

Tex., Longview—Gregg Co., Courthouse, road constr. and improvs., Precinct 2, **$70,000**; road building, resurf., reconditioning Precinct 4, **$25,000**, force account. CD 7/9 ENR 7/22.

Tex., Taylor—Williamson Co., Courthouse, Georgetown, grav. Feeder Roads Precinct 4, force account, **$35,000.** CD 11/10—ENR 11/25.

Tex., Whitney—Lake Whitney Enterprises, c/o C. G. Murray, Whitney, streets and road constr., paving, own forces, **$55,000.**

Wash., Seattle—City County-City Bldg., Zone 4, grading, concrete walks on Ivanhoe Pl. N. E. to Critcher & Raber, 1011 W. Galer St., **$85,983.** Est. $89,968. Bids 2/9. CD 8/23—ENR 9/2.

Alaska, Anchorage—City, City Hall, paving streets, sidewalks, curbs, gutters, to Kiesel & King Co., Anchorage, **$350,723.** Bids 10/30. CD 11/23—ENR 12/2, under LB.

EARTHWORK, WATERWAYS

BIDS ASKED

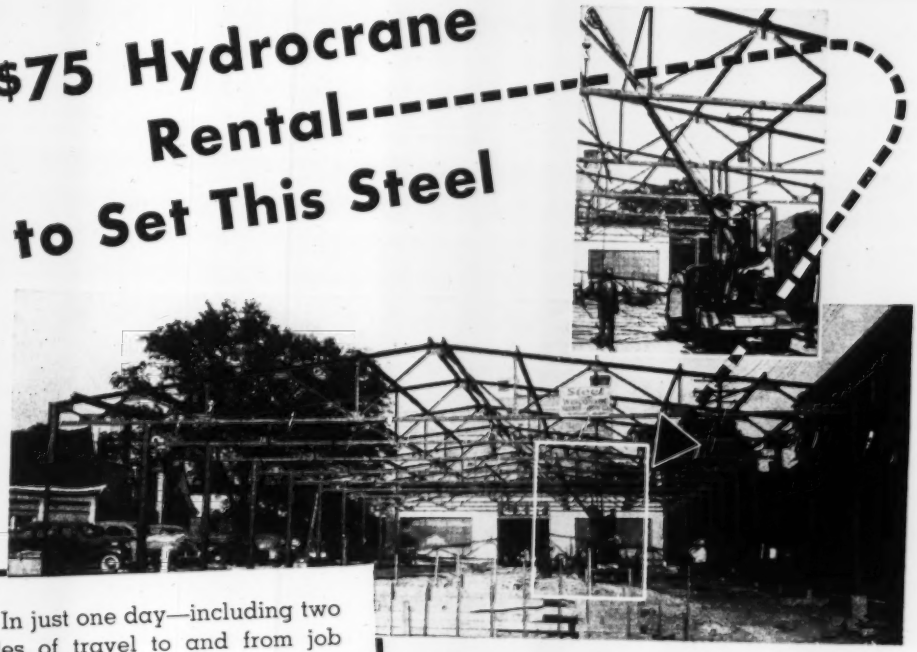
March 1

†**Illinois**—U. S. Eng., 826 U. S. Court House & Custom House, St. Louis, 1. Mo., levees, Wood River Drainage and Levee Dist., Proj. Item 1-C, Madison Co., Serial No. Eng. 22-095-49-110.

†**New Jersey**—U. S. Eng., 120 Wall St., New York 5, N. Y., dredging approx. 433,500 cu. yd. material, except ledge rock from Passaic River near Harrison.

(Continued on page 41)

$75 Hydrocrane Rental---------- to Set This Steel



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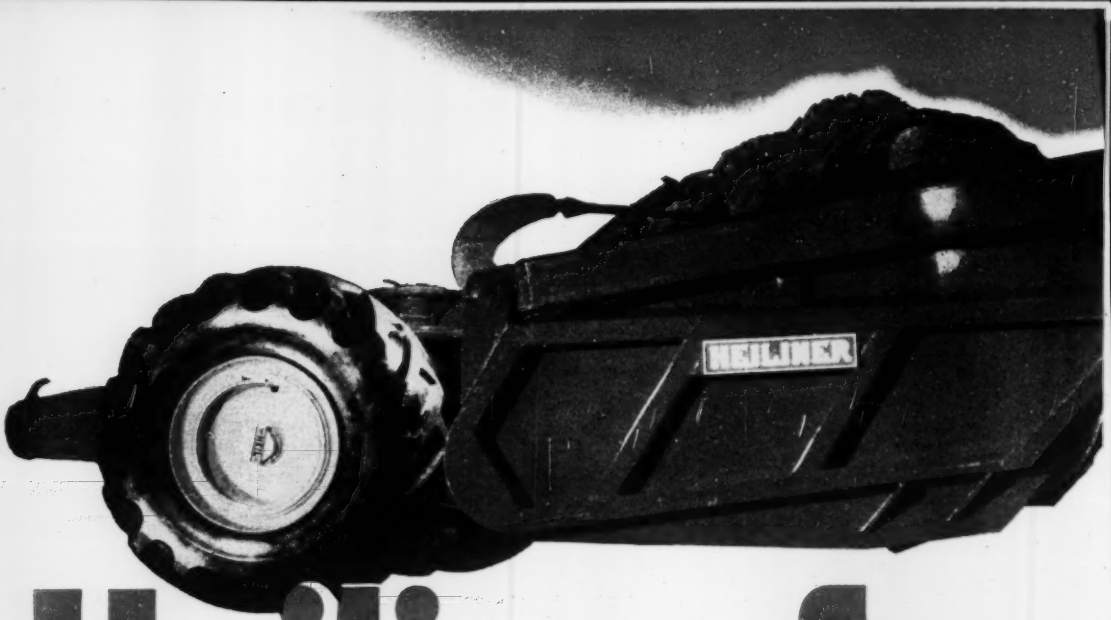

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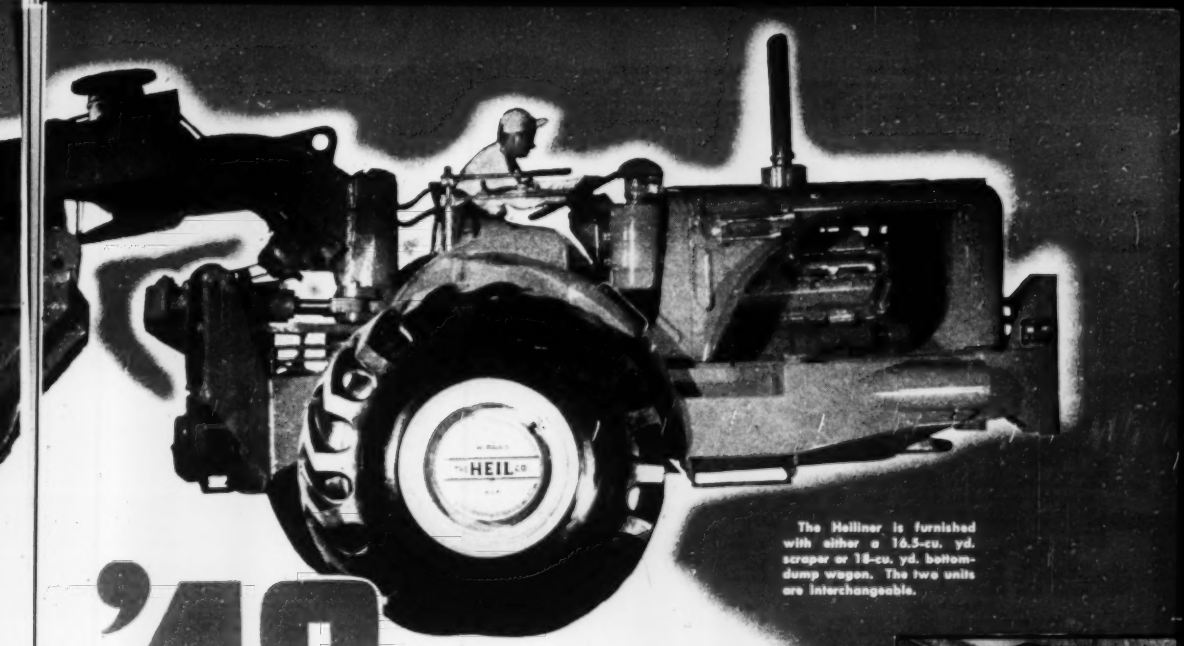

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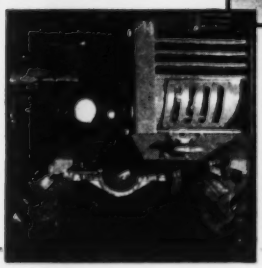

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(Continued from page 36)

†**South Carolina**—U. S. Eng., Custom House, Charleston, maintenance dredging in Charleston Harbor, Cooper River and Town Creek (Shoals Nos. 5A, 6 and 6A), Serial No. Eng-38-081-49-7.

March 2

Illinois — State Dpt. Conservation, Leonard Schwartz, dir., State Capitol, Springfield, roads, parking areas, boat landing, Proj. No. 388-XS 30-4, Henry Co., 5 mi. north of Kewanee. Plans deposit $5. Engineering Section, 301½ E. Monroe St., Springfield, engr. CD 8/14/44—ENR 8/24/44.

March 3

†**Georgia**—U. S. Eng., P. O. Box 1169, Mobile 7, Ala., tailrace channel deepening at Allatoona Dam, Etowah River. Serial No. Eng.-01-076-49-101. Extended date, 1/3—1/6.

●†**North Dakota**—U. S. Eng., Fort Lincoln, Box 300, Bismarck, tunnels for Garrison Dam Proj., Missouri River, Inv. Eng-32-**[illegible]**-49. Est. $13,000,000-$18,000,000. Extended date. CD 1/4—ENR 2/3.

March 4

†**California**—U. S. Eng., 751 S. Figueroa St., Los Angeles. Zone 14. Los Angeles River imprvt., Tujunga, Wash. to Whitsett Ave., River Mile 37.71 to River 38.61, Serial No. Eng.-40-353-49-47. Extended date. CD 2/3—ENR 2.10.

March 8

†**Montana**—U. S. Eng., Fort Peck, drain ditch for pressure relief wells, access road**way and** revisions to relief well outlet facilities, Fort Peck, Serial No. Eng. 24-018-49-63.

†**Virginia**—U. S. Eng., P. O. Box 119, Fort Norfolk, Norfolk, tainter gates, embedded parts and anchorages, Buggs Island Dam, Roanoke River, Inv. Eng-44-110-49-149. $700,-000-01,000,000.

About March 10

†**Minn., St. Paul**—U. S. Eng., 1217 U. S. Post Office & Custom House, St. Paul, Zone 2, small boat harbor and channel imprv.

March 11

†**Wyoming**—Bureau Reclamation, Dpt. Interior, Cody, earthwork, canal lining and concrete siphon, Station 24 plus 93.50 to Station 34 plus 53.98, Willwood Canal **relocation**, Willwood Div. Shoshone Proj. in vicinity of **Ralston, Spec. 2559.**

March 15

†**Oregon**—U. S. Eng., 19 E. Poplar St., Walla Walla, Wash., design, fabrication and delivery of equip. for navigation lock at McNary Dam, Umatilla.

April 1

●†**Oregon**—U. S. Eng., Pittock Block, Portland, 2 turbines and governors, Detroit Dam. Est. $1,000,000-$2,000,000. CD 6/10/44—ENR 6/29/44.

LOW BIDDERS

†**Arkansas**—U. S. Eng., 400 Broadway, Little Rock, Feb. 8, approx. 200,000 bbl. portland cement for Bull Shoals Reservoir on White River, Mountain Home, Ozark Universal Atlas Co., 208 S. La Salle St., Chicago, Ill. **$700,000.** CD 2/2.

Calif., San Francisco—Park Comm. of City and County of San Francisco, Golden Gate Park, Feb. 7, irrigation sys., Unit 2, second part and Unit 3, Golden Gate Park, from Ferguson Bros., 8823 San Leandro St., Oakland, **$86,650.** CD 1/24—ENR 1/27.

CONTRACTS AWARDED

†**North Dakota**—U. S. Eng., 180 E. Kellogg St., St. Paul, Minn., rock for slope protection on Homme Dam, at Park River, Inv. Eng-21-018-49-60, to LaVoy & Scheffler, Fargo, **$59,940.**

†**Virginia and North Carolina**—U. S. Eng., P. O. Box 119, Fort Norfolk, Va., Zone 1, gate hoists, Inv. Eng-44-110-48-241, to Lakeside Bridge & Steel Co., 3200 W. Villard Ave., Milwaukee 9, Wis., **$200,880;** furnishing Type II modified cement, Inv. Eng-44-110-49-80, to Lone Star Cement Corp., National Bank of Commerce Bldg., Norfolk, Va., **$122,500,** for Buggs Island Reservoir Proj., Roanoke River.

†**Virginia**—U. S. Eng., foot of Front St., Norfolk, maintenance dredging shoals below Hopewell, James River, Inv. Serial No. Eng-44-110-49-132, to Norfolk Dredging Co., Compostella Wharf, Norfolk, **$209,961.** Bids 1/25, awarded 2/1. CD 1/26—ENR 2/3.

AIRPORTS AND AIRBASES

BIDS ASKED

March 10

†**Mo., Joplin** — INSTRUMENT LANDING SYSTEM—Civil Aeronautics Admin., City Hall, Kansas City, Mo., instrument landing sys., municipal airport.

March 11

†**Minn., Duluth**—AIRPORT IMPRVS.—U. S. Eng., 1709 Jackson St., Omaha, Neb., 2 story lean-to hangar, central heating plant, steam distr. sys., water storage reservoir, sewage disposal plant, electrical unit substation and underground distr. sys., Serial No. Eng. 25-068-49-176. Extended date. CD 1/31—ENR 2/3.

LOW BIDDERS

Ia., Des Moines—ADMINISTRATION BLDG. —City, City Hall, Feb. 7, general contract administration bldg. at airport, from Garner & Stiles, Corp., 519 14 St., Des Moines, **$311,700.** CD 1/11—ENR 1/13.

†**Alaska**—CONCRETE, etc.—U. S. Eng. (APO 942, c/o P.M., Seattle, Wash.) Anchorage, rejected bids, Feb. 5, furnishing transmit mix concrete aggregate and batched aggregate and cement for construction projects, L. B. **$774,-062.** CD 2/15—ENR 2/17, under LB.

PUBLIC BUILDINGS

BIDS ASKED

March 1

Ill., Carbondale—State, Springfield, general and mechanical work, Chemical Bldg., Illinois State Teachers College, C. Herrick Hammond, State Armory, Springfield, state archt. CD 4/9/45—ENR 4/19/45.

Ill., Jacksonville—State, Springfield, general work, heating, plumbing, electrical work residential unit, Jacksonville State Hospital, $250,000. C. Herrick Hammond, State Armory, Springfield, state archt. CD 4/9/45—ENR 4/19/45.

Ill., Jacksonville—State, Springfield, general work, heating, ventilating, plumbing, electrical work, assembly hall addn. to main bldg. at Illinois School for Blind, $250,000. C. Herrick Hammond, State Armory, Springfield, ch. archt. CD 4/6/45—ENR 4/19/45.

Md., Baltimore—Baltimore Museum of Art, Charles and 31 Sts., (selected list of bidders), 2 story, bsmnt., brick addn. to Saidie A. May, Young Peoples Art Center. Wrenn, Lewis & Jencks, 113 W. Mulberry St., archts. CD 9/19/46—ENR 10/3/46.

March 2

La., Jennings—State Div. Admin., 201 Capitol Annex, Baton Rouge, 1 story, brick, armory bldg. Plans deposit $20. Theodore L. Perrier, 806 Carondelet Bldg., New Orelans, archt.

La., Winnfield — Louisiana State Dir. of Admin., Capitol Annex Bldg., Baton Rouge, 1 story, brick armory bldg. Plans deposit $20. G. P. Rice, 406 Audubon Bldg., New Orleans, engr.

March 3

†**Fla., Gainesville**—Officer in Charge of Construction, Charleston Naval Shipyard, Naval Base, S. C., 125 x 140 ft. concrete masonry bldg. at Naval Reserve Training Center, Spec. 2149. Plans deposit $3.

March 4

Mass., Boston—City of Boston Housing Authority, 10 Post Office Sq., 48 unit, 3 story, brick veterans housing, Victory Rd. and Adams St., Dorchester, $480,000. Plans deposit $50. G. Nelson Jacobs, 18 Oliver St., archt. CD 10/18—ENR 11/11.

March 7

Mass., Canton—Town, School Dpt., Canton, high school. Over $250,000. Maginnis & Walsh, 126 Newbury St., Boston, archts. John R. Nichols & Paul Nichols, 285 Columbus Ave., Boston, structural engrs. CD 1/31/46.

March 8

La., Thibodaux—City, Chas. Delas, mayor, Thibodaux, 2 story, 70 x 77 ft., brick, stone city hall. Plans deposit $25. Wm. R. Burke, 414 Pan American Bldg., New Orleans, archt.

Mass., Brookline—Town, Roger B. Tyler, chn. Bldg. Com., Town Hall, high school addn., alterations to high sch. Over $250,000. Plans deposit $100. Kilham, Hopkins Greeley & Brodie, 126 Newbury St., Boston, archts. CD 9/3—ENR 9/20.

†**N. J., Somerville**—Veterans Admin., 5000 Wissahickon Ave., Phila. L. Pa., applying new roofs to Warehouses Nos. T-14, T-15, T-16 and T-17, Veterans Admin. Supply Depot. Spec. No. P-4901, Proj. No. A3-600-15.

†**Oklahoma**—U. S. Eng., 416 Wright Bldg., Tulsa, design, manufactures, test and deliver f.o.b. railroad cars at Fort Gibson Dam, six 2,500-3375 Kva. transformers, Fort Gibson Power Plant, CD Grand (Neosho) River, Inv. Eng.-34-066-49-76. $200,000-$300,000.

March 9

Calif., Concord—Mount Diablo Union High School Dist., 2 story, rein.-con. classroom bldg. and rein.-con. steel gymnasium bldg., gyms and swimming pool at Mt. Diablo Union High School district. Plans deposit $25. Bamberger & Reid, 417 Market St., San Francisco and Reynolds & Chamberlain, 3833 Piedmont Ave., Oakland, archts. Hall & Pregnoff, 221 Pine St., San Francisco, engrs. CD 8/5—ENR 8/12.

●**Ind., Westville**—State, Div. P. Wks. & Supply, W. Myberg, dir., 404 State House, Indianapolis. Contr. 8, 1 story, 42 x 302 ft. general stores bldg. $152,000. 1 story, bsmnt., 42 x 182 ft. and 42 x 302 ft. Units A and B service bldgs., $164,000. Contr. 10, 1 story, 32 x 28 ft., sewage treatment plant, $26,000. Contr. 11, storm and sanitary sewers, $290,000. Contr. 12, water dist. sys. $100,000. Contr. 14, 1 story, 62 x 222 ft. laundry bldg., $266,000. Contr. 15, roads and site imprvs., $100,000, at Children's Northern Indiana Hospital. Plans deposit $50. Boyd Phelps, 232 Franklin St., Michigan City, archt. and engr. CD 12/9.

†**Louisiana and Mississippi** —U. S. Eng., P. O. Box 1169, Mobile, 7, Ala., office at Lock 3, Pearl River. Serial No. Eng. 01-076-49-84. Extended date. CD 2/14—ENR 2/17.

N. C., Raleigh—Bd. Comrs. Wake Co., John P. Swain, chn., Courthouse, 3 story, brick, glass county office. McDowell and Davie Sts. Wm. H. Deitrick, Morgan St., archt. CD 9/14—ENR 9/30.

Pa., Phila.—Dpt. Property & Supplies, 18 and Herr Sts., Harrisburg, (1) general constr. (2) mechanical equip. and piping (3) electrical (4) constructing chimneys for boiler plant for female group at Philadelphia (Byberry) State Hospital. Plans deposit $15 for 1 and 2; $10 for 3 and 4 each. Day & Zimmerman, Inc., 620 Packard Bldg., engrs. CD 2/10/47—ENR 2/20/47.

Wash., Seattle—City, County—City Bldg., Zone 4, 1 story, rein.-con. engineering department shop bldg. $400,000. Plans deposit $75. Thomas, Grainger & Thomas, Arcade Bldg., Zone 1, archts. CD 1/16—ENR 2/5.

March 10

†**Arizona** — Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b., cars shipping point of f.o.b. cars Wellton, Ariz., one 30 ton, one 25 ton and one 15 ton traveling cranes for Pumping Plants 12, 3, and 3, Wellton-Mohawk Div., Gila Proj., Spec. 2560. L. N. McClellan, ch. engr.

Fla., Haines City—Polk Co. Bd. Pub. Instruction, Bartow, high school. $350,000. Extended date. L. Alex Hatton, Orlando, archt. CD 10/14—ENR 10/21.

Mass., Agawam—Town of Agawam Housing, Authority, R. A. Charpentier, chn., Town Hall, eight or nine 2 story, wood, concrete 4 family houses, $320,000. Plans deposit $100. Wagner Mac Neish, 134 Chestnut St. Springfield, archt. and Engineering Service, 134 Chestnut St., Springfield engr. CD 10/1—ENR 10/28.

Mass., Salem—City Housing Auth., Salem, 32 unit, eight 2 story, bsmnt., frame, brick, steel, veterans housing, Norfolk Ave., $320,000. Plans deposit $25. Edward Sears Reed & Assoc., 177 State St., Boston, archts. CD 11/11—ENR 12/9.

●**Neb., Omaha** — U. S. Eng., 1709 Jackson St., Omaha, Zone 2, Veterans Admin. Hospital Standard quarters, incl. necessary utilities, connection of same to existing sys. at Omaha Veterans Admin. Hospital Serial No. 25-066-49-177, for Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C. CD 1/24—ENR 2/3.

March 15

†**Ill., Carbondale** — National Guard Bureau, U. S. Property & Disbursing Officer, Camp Ellis, motor storage bldg.

†**N. Y., Buffalo**—U. S. Eng., foot Bridge St., Zone 7, residence bldg., Veterans Admin. Hospital, Eng-30-023-48-82, for Veterans Admin., Vermont Ave. between H and I Sts. N. W., Wash. 25, D. C. CD 1/18—ENR 1/20.

March 17

†**Arizona - California - Nevada — Bureau** Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Boulder City, Nev., 2 governors for regulating speed of 115,000 hp. hydraulic turbines for Units A 3 and A 4 in Hoover Power Plant, Boulder Canyon Proj., Spec. 2571. L. N. McClellan, ch. engr.

Miss., State College—State Bldg. Comm., New Capitol Bldg., Jackson, library, Campus of Mississippi State College. Plans deposit $75. Thomas H. Johnston Jr., Thomas Shelton Collins & H. Shaw, Walker Bldg., Starkville assoc. archts. CD 6/30/47—ENR 7/24/47.

March 22

†**Va., Camp Lee (Branch Petersburg)** — U. S. Eng., First and Douglas Sts. N.W., Wash. 25, D. C., 2 concrete, masonry barracks for enlisted men, Serial N. 49-080-49-104 (26) M-A.

CD 10/28—ENR 11/11.

Bids Asked

†**R. I., Newport**—Pub. Wks. Naval Training Station, Newport, altering bldgs. into classrooms, galley for 650 Reserve Officers. $125,-000. Cull & Robinson, 811 Industrial Trust Bldg., Providence, archts. CD 2/14.

LOW BIDDERS

†**Del., Wilmington**— U. S. Eng., 121 N. Broad St., Phila. 1, Pa., Feb. 8, consolidated quarters apartment for Veterans Admin., 765 Arlington Blvd., Wash. D. C. from Reddrop & Co., 26 E. 23 St., Baltimore 18, Md., **$436,000.** Est. $367,-472.

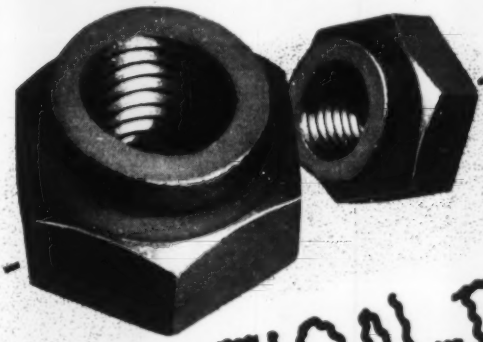
Ky., Paris—Bourbon Co., Fiscal Court, Paris, Feb. 10, general contract hospital, from Grayson-Jones Constr. Co., Lexington, **$492,481.** Est **$700,000.** CD 1/29—ENR 2/3.

Mass., Amherst—Commonwealth of Mass., R. D. Hawley treas., University of Mass., Amherst, Feb. 10, animal disease control laboratory, P-E 12, from D. A. Sullivan & Sons, Inc., 82 North St., Northampton, **$457,378.** CD 1/31—ENR 2/3.

Mass., Arlington—Town, School Com., H. M. Ek-thwaite, chn., Arlington, Feb. 3, Mystic Side School, Stowecroft Rd., from Hessl Constr. Inc., 43 Leon St., Boston, **$363,433.** Cleverdon, Varney & Pike, 126 Tremont St., Boston, engrs. CD 1/14—ENR 1/27.

Mass., Billerica—Town, supt. Schools, Billerica, rejected bids Jan. 15, Elm School addn., Pinehurst Dist. **$450,000.** Will readvertise. CD 1/26/49, under LB.

Mass., Framingham—Town, School Comn., Framingham, Feb. 8, high school addn., from Frankini Constr. Co. Inc., 26 Mystic Ave., Medford, **$523,190.** CD 1/14—ENR 1/27.



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CITY ZONE STATE

Mass., Sudbury—Township of Sudbury, School Bldg. Comm., Selectmens Office, Town Hall, elementary school, from S. Volpe & Co. Inc., 150 Congress St., Boston. **$395,989.** S. W. Haynes & Assoc., 336 Main St., Fitchburg, archts.

N. D., Grafton—State Bd. Admin., Bismarck, Feb. 3, general contract hospital at State School, from Lenci, Lenci, Englund, Virginia, Minn. **$465,000.** CD 1/13—ENR 1/27.

Pa., Woodville—Dpt. Property & Supplies, 18 and Herr Sts., Harrisburg, Feb. 9, general contract, boiler plant improv. at Woodville State Hospital, from Landau Bros., Bldg. Co., 125 1st Ave., Pittsburgh. **$103,000.** The Chester Engineers, 232 Amanda Ave., Pittsburgh, Zone 10, engrs.

●†Tex., Bonham—U. S. Eng., Box 51, Tulsa, Okla., Feb. 10, general contract 300 bed domiciliary and 50 bed general medical hospital Inv. Eng 34-064-49-36, for Veterans Admin., Vermont Ave. between H and I Sts. N. W., Wash. 25, D. C., from J. J. Fritch, 6834 Harry Hines Blvd., Dallas. **$4,325,005.** CD 1 18—ENR 1/20.

†Alaska—Civil Aeronautics Admin., Anchorage, Feb. 7, 4 unit apartments at Woody Island, from Henry Woolf, Anchorage. **$395,837;** at Annette, from Berggeson & McPhail, Route 10, Box 971, Tacoma, Wash., **$566,944.** CD 1/20—ENR 1/27, under LB.

CONTRACTS AWARDED

Ind., La Grange—Bd. Comrs., La Grange Co., Court House, general contract, memorial hospital, to Buesching Bros. Constr. Co., 219 E. Berry St., Fort Wayne. **$351,264.** Awarded 2/9. CD 9/30—ENR 10/7, under L3.

Miss., Columbia—Marion Co., Columbia, Feb. 7, general contract hospital, to M. T. Reed Constr. Co., 162 Millsaps Ave., **$166,183.** CD 1/13—ENR 1/27.

Mo., Marshall—State Dpt. P. Health & Welfare, Sam Marsh, dir., State Office Bldg., Jefferson City, and John F. Powell, dir. P. Bldgs., State Capitol, Jefferson City, 3 story, 42x169 ft., brick, concrete, stone hospital, Missouri State School, to E. A. Brunson Constr. Co., 4055 Forest Park Blvd., St. Louis, Zone 9. **$138,869.** Bids 1/27, CD 2/8—ENR 2/10, under LB.

N. M., Las Cruces—Dona Ana County and City of Las Cruces, city-county hospital, to C. H. Leavell & Co., 1900 Wyoming St., El Paso, Tex., base contract **$360,297.** Bids 12/18, CD 12/28—ENR 1/6, under LB.

Ont., Toronto—City, H. E. Callum, mayor, 7 story, steel, concrete, brick addn. to Toronto East General and Orthopaedic Hospital, Coxwell Ave. near Sammon Ave., to W. R. Sullivan Constr. Ltd., 20 Bloor St. W. Approx. **$609,000.** CD 1/28—ENR 2/3, under LB.

COMMERCIAL BUILDINGS

BIDS ASKED

About March 15

La., Lake Charles—W. L. Paternostro, c/o Gabriel & Reames, archts., Rountain Bldg., theater, $350,000. CD 2/10—ENR 2/24.

About April 1

Neb., Wakefield—Wakefield Community Hospital, c/o William Brittle, archt., insurance Exchange Bldg., Sioux City, Ia., hospital, $350,000. CD 2/10.

SOON LETS CONTRACT

Calif., San Francisco—Regal Amber Brewing Co., 575 Treat Ave., soon lets contract 3 story, Class A 75 x 95 ft. administration bldg., Over $250,000. H. C. Baumann, 251 Kearny St., archt.

Calif., Whittier—Whittier College, 505 E. Philadelphia St., soon lets contract dormitory $250,000. Plans deposit $50. W. H. Harrison, 816 W. 5 St., Los Angeles, archt. CD 1/17—ENR 2/3.

Conn., New Haven—Connecticut State Hospital Society, 258 Church St., soon lets contract, brick, steel, concrete medical bldg., St. Ronan and Edwards Sts. Douglas Orr, 96 Grove St., archt.

Mo., St. Louis—Parish of the Epiphany of Our Lord, Rev. Charles P. Maxwell, pastor, 6598 Smiley Ave., St. Louis Zone 9, soon lets contract 1 story, 138 x 145 ft., brick, steel, concrete gymnasium and recreational bldg., Raymond E. Martin, Chemical Bldg., 721 Olive St., Zone 1, archt.

Tex., Dallas—Wynnewood Development Co., 2311 Salerno St., soon lets contract masonry, brick, shopping village, Bldg. 1, $300,000. De Witt & Swank, 2025 Cedar Springs Rd., archts.

Wis., Green Bay—Wisconsin Telephone Co., 722 N. Broadway, Milwaukee, Zone 2, soon lets contract 2 story, basmt., 102x133 ft., reinforcing, brick, cut stone, telephone central office, Foeller, Schober, Berners, Safford & John, 316 Pine St., archts.

CONTRACTS AWARDED

Fla., Miami—Central Baptist Church, c/o Lloyd F. Vann & John M. Lyell, archts., 1674 Coral Way, church, to C. E. Bryson, 3235 N. Miami Ave. Est. over **$250,000.**

Kan., Fredonia—Sisters of Mercy, Fort Scott, general contract, St. Margarets Mercy Hospital, to Blasser Constr. Co., 430 N. Rock Island, Wichita. **$120,787.** Bids 1/7. CD 1/17—ENR 1/27, under LB.

N. J., East Paterson—Nicosia Bros., c/o Erwin Gerber, archts., 1180 Raymond Blvd., Newark, 48-family garden apartment proj. to be called Terrace Gardens at Elmwood Terrace and Glenwood Ave. Owner builds. **$400,000.**

N. Y., Mt Vernon—Genung's Inc., 34 S. 4 Ave., department store alterations to Frank Angelilli Constr. Co., Inc., 57 Clinton St., Yonkers. Est. **$250,000.** Stohldrier & Zetsche, Northcourt Bldg., White Plains, archts.

Tex., Dallas—I. A. & I. S. Fonville, 1446 Buckner Blvd., housing, off Seveene Rd., between Pleasant Mound and Mesquite Sts., own forces. **$150,000.** CD 1/26.

Tex., Houston—L. P. McKenzie, 2128 W. Alabama Ave., 16 brick apartments, concrete slab fdn., 3300 Block, Belfontaine, Owner builds. **$372,000.**

●Tex., Houston—Plumb-Mitchell, Inc., 4550 Griggs Rd., shopping center, Long Dr. at Telephone Rd. Owner builds. **$2,250,000.** CD 2/2—ENR 2/17.

Tex., Houston—Jack G. Vest, Bellaire, 15 dwellings, Braeswood area. Owner builds. **$750,000.** CD 2/3—ENR 2/17.

Tex., Pasadena—Alexander Zager, 900 Harris St., Houston, 75x500 ft. masonry shopping center, 150 auto parking paved area, 900 block Harris St. Owner builds. Approx. **$500,000.**

Tex., San Antonio—Benton & Jones, Culebra Rd., addnl. housing, Harlandale and Southside Sects. Owner builds. **$275,000.** CD 2/10.

Tex., Sherman—Sherman Industrial Foundation, Sherman, 58 dwellings, to Don Elliott, Sherman. **$310,000.** CD 1/28—ENR 2/3, under CA.

INDUSTRIAL BUILDINGS

BIDS ASKED

March 10

Ga., Ocilla—WAREHOUSE, etc.—Irwin County Electric Membership Corp., Ocilla, warehouse and office. Plans deposit $25. Southern Eng. Co., 699 Spring St. N. W., Atlanta, archts.

Bids Asked

Ill., North Chicago—WAREHOUSE—Motor Products Corp., North Chicago, 1 story, 100x300 ft., concrete warehouse, Ekstrand & Schad, Waukegan, archts.

SOON LETS CONTRACT

●Ark., Pine Bluff—FACTORY—Pinecrest Cotton Mills, Inc., Pine Bluff, soon lets contract clothes mfg. factory, $3,000,000. Harry & Schmaker, 410 Scarritt Arcade, Kansas City, Mo., archts. CD 11/29—ENR 12/9.

Md., Baltimore—SALES and SERVICE—Miller Motors, Inc., 5937 Belair Rd., soon lets contract 1 story, 70x150 ft., steel, concrete, brick auto sales and service bldg. Cyril H. Hebrank, 20 E. Lexington St., archt.

Mass., Cambridge—WAREHOUSE, etc.—West Disinfecting Co., 49 Commercial Wharf, Boston, soon lets contract 1 story, 30 x 140 ft. warehouse and office, Fayette St. Over $68,000. Charles T. Main, Inc., 80 Federal St., Boston, engr.

Mass., Chelsea—WAREHOUSE, etc.—Pinco Rubber Co., 54 Highland St., soon lets contract 2 story, L shape brick and concrete and office. Over $68,000. Anderson-Nichols & Co., 53 State St., Boston, archts. Washorne-Brown Co., 48 Franklin St., Boston, engr.

Ont., Windsor—PLANT—Ford Motor Co. of Canada, Ltd., 2780 Sandwich St., E., soon lets contract for plant alterations, addns. Approx. $100,000. CD 12/3.47—ENR 1/8/48.

LOW BIDDERS

La., Franklinton—WAREHOUSE, etc.—Washington-St. Tammany Electric Co-operative, Franklinton, Feb. 7, warehouse and office, from Sherman Constr. Co., McComb, Miss., **$67,800.** CD 2/2—ENR 2/10.

Tex., Houston—PLANT—Natural Gas Odorizing Co., 7620 Wallisville Rd., plant, from James B. Dent, P. O. Box 6275, **$70,000.** CD 1/31—ENR 2/3.

CONTRACTS AWARDED

Ill., Chicago—PLANT—Motorola Co., Inc., 4545 W. Augusta Blvd., 1 story, 80x246 ft., brick, steel plant bldg., to Ragner Benson, Inc., 4744 W. Rice St. Est. **$125,000.** Victor L. Charn, 4744 W. Rice St., archt.

Ill., Chicago—PLANT—3201 S. Kostner Ave. Building Corp., 3201 S. Kostner Ave., brick, steel plant, separate contracts. **$450,000.** Sidney H. Minchin, 127 N. Dearborn St., archt.

Ill., East Alton—PLANT—Western Cartridge Div. of Olin Industries, East Alton, general contract 1 story, 60x180 ft., steel, concrete, plant, to J. J. Wuellner & Son, 101 Oak St., Alton. Bids 1/26. CD 11/19—ENR 12/16.

La., New Orleans—PLANT—American Radiator & Sanitary Corp., c/o contractor, plant remodeling and repairing, to R. F. Farnsworth & Co., Inc., 1515 S. Salcedo St., Ext. over **$100,000.** CD 1/27—ENR 2/10.

La., Shreveport—WAREHOUSE—United Gas Pipe Line Co., c/o contractor, warehouse, to Wethey Co., 1320 Pierre Ave. Est. **$75,000.**

Md., Baltimore—WAREHOUSE REPAIRS—W. G. Scarlett & Co., 729 E. Pratt St., floors and roof, warehouse, to Consolidated Eng. Co. Inc., 20 E. Franklin St., **$75,000.** CD 7/19—ENR 7/29.

Mo., St. Louis—GRAIN STORAGE, etc.—Anheuser-Busch, Inc., 721 Pestalozzi St., Zone 18, 30 x 146 ft. grain storage and shipping bldg., 100 ft. high, 3000 S. 7 St., to Fruin-Colnon Contg. Co., 1706 Olive St., Zone 3. Jones-Hettlesater Co., 911 Baltimore Ave., Kansas City, Mo., engr.

Mo., St. Louis—STORAGE—Grossman Iron & Metal Co., 2200 N. Wharf St., 1 story, 60 x 124 ft. brick, steel, concrete storage bldg., 1 N. Market St., to Jacob Rubin & Sons, 616 Ryder Bldg., Zone 1, S. L. Rubin, 615 Ryder Bldg., Zone 1, archt.

N. C., Charlotte—REFINERY—**Swift & Co.,** 400 S. Mint St., meat packing refinery, to McKoy-Helgerson Co., Greenville, S. C. Bids 12/8. CD 11/24—ENR 12/2.

Tex., Bonham—WAREHOUSE—Jacques Poe Saw Co., Bonham and Denison, warehouse, Purchase and Hire. **$75,000.**

Tex., Houston—POWER PLANT—Houston Light & Power Co., Electric Bldg., Fort Worth, power plant unit, concrete, hollow tile walls, rein.-con. fdn., 500 St. Andrews St., force account. **$85,000.** CD 9/10/47—ENR 9/18/47.

Tex., McKinney—TEXTILE MILL—Texas Textile Mills, McKinney, reconstructing portions & textile mill, force account. **$275,000.** CD 5/12—ENR 5/27.

Ont., Ajax—PLANT—Viscose Products Co., Ajax, 1 story, 150x233 ft. concrete, steel brick factory, 4 story tower, to Milne & Nicholls Ltd., 57 Bloor St. W., Toronto. Est. **$750,000.** N. A. Armstrong, 19 Melinda St., Toronto, archt.

Que., Montreal—WAREHOUSE—Marvens Ltd., Moncton, N. B. concrete, steel, brick warehouse, to Ogilvie & Dufresne, Inc., 2228 Wakley Ave., **$100,000.** S. Comlier & Son, 4444 W. Sherbrooke St., archt.

UNCLASSIFIED

BIDS ASKED

March 1

Mass., Natick—RECREATION CENTER—Italian American Center, M. Palladino, 85 Middlesex Ave., 1 story, 40x100 ft. concrete field house, bldg. facilities, recreation center, Whitney Field, $75,000. F. G. Cantrel, 153 E. Central St., archt.

March 4

Ont., Ottawa—COLISEUM WING—H. H. McElroy, secy., c/o Central Canada Exhibition, Lansdowne Park. Bank St., steel, concrete coliseum bldg. wing. Approx. $300,000. Hazelgrove & Lithwick, 53 Queen St., archts. CD 10/22—ENR 11/25.

March 8

Calif., Merced—EXHIBIT BLDG.—State Div. Architecture, P. Wks. Bldg., Sacramento, 81 x 198 ft. stucco, wood, steel rigid trusses exhibit bldg. for 35th District Agricultural Assn. Plans deposit $25. Anson Boyd, Sacramento, state archt.

Calif., San Francisco—TRACKS—Public Utilities Comm., City Hall, reconstructing tracks at Geary and Market Sts., Spec. 330. Over $50,000. Plans deposit $10.

N. Y., St. George—HEATING and VENTILATING—Comr. Marine & Aviation, Pier A North River, foot of Battery Pl., New York. Zone 4, heating and ventilating facilities for terminal bldgs., reconstructing terminal and approaches at St. George Ferry Terminal Contr. 2596 R. Plans deposit $15. CD 5/21/47—ENR 5/13/48.

†Va., Fort Eustis—BOAT FACILITIES—U. S. Eng., foot of Front St., Norfolk, small-boat facilities alterations, addns. for U. S. Maritime Comm., Warwick Co., Inv. Serial No. Eng-44-110-49-148.

March 11

†Missouri—RELOCATING RAILROAD—U. S. Eng., 601 Davidson Bldg., Kansas City, Mo., C. B. & Q. Railroad relocation, Oxford Branch, Serial No. Eng. 23-028-49-136.

March 15

†Arkansas—SWITCHBOARDS, etc.—U. S. Eng., 209 Broadway, Little Rock, install and wire powerhouse and switchboard equip. at Norfolk Dam, incl switchboards, power transformers, etc., Inv. Eng. 03-056-47-37.

†Washington—RAILROAD RELOCATION—U. S. Eng., 19 E. Poplar St., Walla Walla, relocating 17.8 mi. sect. Spokane, Portland & Seattle Ry., at Plymouth.

March 22

†Colorado—TRANSMISSION LINE—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Bush-Yuma 69 kilovolt transmission line, Colorado-Big Thompson Proj. between Brush and Yuma, Spec. 2555. L. N. McClellan, ch. engr.

March 24

†Colorado—TRANSFORMER, etc.—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, furnishing, del. f.o.b. cars shipping point or f.o.b. cars Wild's Spur, outdoor power transformers, station-type step-voltage regulator, outdoor, bypass disconnecting switches, outdoor distr.-type lightning arresters, undergrounded neutral circuit, for installation at Estes 69,000 volt substation, Colorado-Big Thompson Proj., Spec. 2563. L. N. McClellan, ch. engr.

†Wyoming—CONTROL RELAY BOARD, etc.—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., 1 control and relay board, 2 distribution panel boards and 1 battery charger for Hanna sub-station, Kendrick Proj., Spec. 2566.

TAPPING SCREWS | ROPE CLIPS | SET SCREWS | PLOW BOLTS
"1035" CAP SCREWS | MACHINE BOLTS | CARRIAGE BOLTS | COTTER PINS
STREET
CITY ZONE STATE

March 29

+Arizona and Nevada — AUTOTRANSFORMERS, etc. — Bureau Reclamation Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing del. f.o.b. cars shipping point of Coolidge Ariz., outdoor autotransformers; station-type lightning arresters; ungrounded-neutral circuits; outdoor, power circuit breakers; outdoor disconnecting switches; grounded-neutral circuit; outdoor current transformers, for Coolidge substation, Davis Dam proj., Spec. 2573. L. N. McClellan, ch. engr.

Bids Asked

Tex., Gainesville—BASEBALL PARK—City, Frank Aldridge, Jr., City Planning Council, baseball park and bleachers, $50,000. CD 2/11.

SOON LETS CONTRACT

Iowa — RURAL DISTRIBUTION LINES — Central Iowa Power Co-operative, Cedar Rapids, soon lets contract 150 mi. rural distr. lines, steel tower. Linn Co., $160,000. Brown Eng. Co., K. P. Bldg., Des Moines, engr.

N. D., Grand Forks—SWITCHGEAR—Minnkota Power Co-operative, Grand Forks, soon lets contract low voltage and medium voltage metal-clad switchgear for power plant. Ellerbe & Co., 1st Natl. Bank Bldg., St. Paul, Minn., engrs. CD 2/5/47—ENR 2/20/47.

LOW BIDDERS

Calif., Eldridge — MECHANICAL and ELECTRICAL SERVICES — State Div. Architecture, P. Wks. Bldg., Sacramento, Feb. 8, mechanical and electrical services (sewer, water and under-ground lines, etc.) at Sonoma State House, from Haas & Rothschild, 274 Brannan St., San Francisco, **(1) $204,718,** from Karl F. Stolting, 1017 2 St., Santa Rosa, **(2) $127,000.** CD 1/24—ENR 1/27.

Mass., Boston—PIER BLDGS—Port of Boston Auth., Commonwealth Pier 5, South Boston, battery charging bldg., Contr. 7, Hoosac Pier 4, Charlestown, from Frankini Constr. Co., Inc., 26 Mystic Ave., Medford, **$67,293.** CD 4/17/44—ENR 5/4/44.

+N. Y., Farmingdale—CEMETERY—U. S. Eng., 120 Wall St., New York, buildings and utilities addns., alterations, Long Island National Cemetery, Inv. Eng-30-075-49-168, from E. W. Jackson Contg. Co., Inc., 24 Kellum Pl., Hempstead, **$190,661.** Est. $201,230. CD 2/1—ENR 2/10, under LH.

South Carolina — RURAL DISTRIBUTION LINES—Santee Electric Co-operative, Inc., Kingstree, Feb. 16, 192 mi. rural distr. lines, Williamsburg, Florence, Georgetown and Clarendon Counties, from Seastrunk Electric Co., 1721 Harden St., Columbia, **$97,500.** McCall-Thomas Eng. Co., Inc., Orangeburg, engr. CD 7/3/46—ENR 7/25/46.

Tennessee—RURAL DISTRIBUTION LINES—Cumberland Electric Membership Corp., Clarksville, Feb. 2, 337 mi. rural distr. lines, Stewart, Montgomery, Robertson, Cheatham and Sumner Counties, from Utilities Constr. Co., Exchange Bldg., Nashville, **$493,687.** CD 1/17—ENR 1/20.

Tex., Deer Park—SWIMMING POOL—Deer Park Independent School Dist., Deer Park, Feb. 8, rein.-con. outdoor swimming pool, from Walter M. Reiney, 1211 Rosine St., Houston, **$81,472.** Est. $80,000. Harry D. Payne, 3808 Main St., Houston, engr.

Tex., Ozona — BLEACHERS, etc. — Ozona School Bd., Ozona, Feb. 9, bleachers in 2 sects., athletic playing field, incl. grading, etc.; fieldhouse; heating plant, from Von Frelick, Inc., P. O. Box 209, San Angelo, **$96,000.** Est. $140,000. David S. Castle Co., 1082½ N. 1 St., Abilene, archt.

CONTRACTS AWARDED

● **Arkansas**—RURAL DISTR. LINES—Arkansas Power & Light Co., Pine Bluff, rural distr. lines, Jefferson Co., to Southwest Utilities Service Co., Jackson, Tenn., and L. E. Myers Co., 53 W. Jackson St., Chicago, Ill. **$1,300,000.** CD 5/17—ENR 6/3.

Ill., Chicago — TUNNEL — Greyhound Corp., 141 W. Jackson St., 220 ft., concrete, steel tunnel to Ragnar Benson, Inc., 4744 W. Byron St., **$500,000.** CD 10/14—ENR 10/21.

Neb., Arnold—LIGHTING SYSTEM EXTEN.—City, City Hall, municipal light sys. exten., incl. generating units, wiring, piping, switchboard, power house addn., to R. W. Hughes Co., Sunderland Bldg., Omaha, **$97,337.** Bids 1/31. CD 1/19.

Tex., Beaumont—LIGHTING SYSTEM—Gulf States Utilities Co., 362 Liberty St., addnl. imprv., modernizing, expanding street, electric lighting sys., force account, **$75,000.**

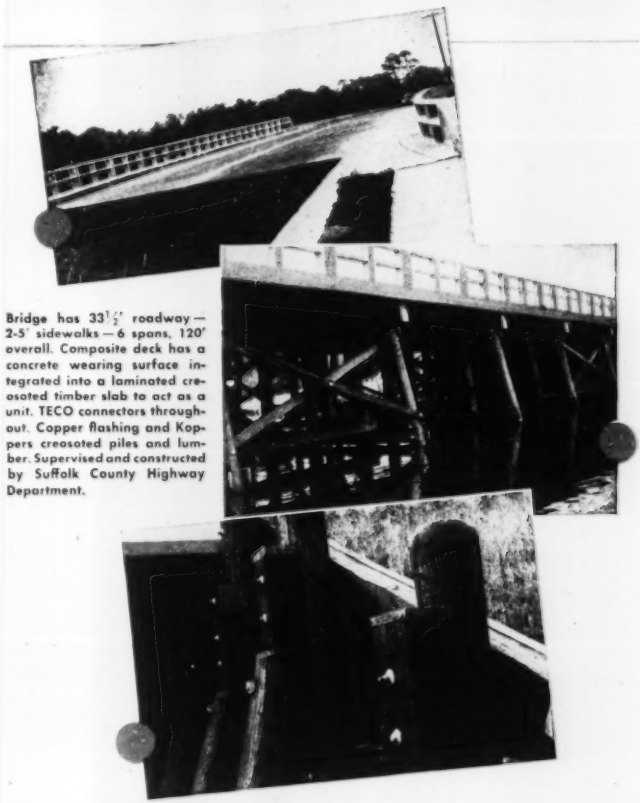
Tex., Dallas — POLES and LINES — Dallas Power & Light Co., Dallas Power & Light Bldg., replacing portions above-ground electric lines throughout city, force account, **$100,000.** CD 2/3—ENR 2/17.

Tex., San Antonio—TELEVISION STATION — San Antonio Television Station, H. H. Coffield & Assoc., Gunter Hotel, television station, (Station KEYL), own forces. **$175,000.** CD 6/9—ENR 6/17.

Tex., Waxahachie — POWER LINE — Texas Power & Light Co., Interurban Bldg., Dallas, reconstructing power line, incl. four 80 ft. steel towers, force account. Approx. **$100,000.** CD 2/3—ENR 2/17.

Wash., Seattle—PIPELINE LINING—City, County-City Bldg., Zone 4, lining Cedar River Pipeline 1 between Beacon Hill and Lincoln Reservoirs, to American Pipe & Constr. Co., 518 N. E. Columbia Blvd., Portland, Ore., $79,753. Est. $80,469. Bids 2/9. CD 2/2.

THE "SUPPORTING" ROLE THAT'S STEALING THE SHOW



Bridge has 33½' roadway — 2-5' sidewalks — 6 spans, 120' overall. Composite deck has a concrete wearing surface integrated into a laminated creosoted timber slab to act as a unit. TECO connectors throughout. Copper flashing and Koppers creosoted piles and lumber. Supervised and constructed by Suffolk County Highway Department.

● Along with the nation's steadily increasing amount of transportation comes ever-increasing praise for Koppers Pressure-Creosoting.

Its performance on piles, decks, posts, and guard rails has led highway engineers across the nation to report that "Koppers Pressure-Creosoting does the job."

By "doing the job" they mean stretching construction budgets. Slashing maintenance costs. Making structural changes easy. Permitting re-use of valuable, expensive members. Providing strength and durability under impact. And its resistance to decay has been proved by performance; many pressure-creosoted bridges, for example, have been in service over a third of a century.

Yes, *Koppers Pressure-Creosoting does the job*—does it *dependably . . . economically . . . permanently.*

KOPPERS PRESSURE-TREATED WOOD

KOPPERS COMPANY, INC., Pittsburgh 19, Pa.

CONSTRUCTION REPORTS—Second Section

Third Section Construction Reports on page 55

WATER SUPPLY

BIDS ASKED

March 7

Md., Towson—Comrs. Baltimore Co., Towson, Celgate Water Pump. Station, appurtenances. Contr. 151W. Plans deposit $5. Wm. F. Neale, Court House, ch. engr. CD 7/26—ENR 8/5.

March 8

Ill., Marissa — Village, Council Chamber, Village Hall, water treatment plant. Plans deposit $15. James G. Cooney, First National Bank Bldg., Belleville, consult. engr.

CONTRACTS AWARDED

Tex., Hearne—City, City Hall, c. & water-lines connecting WW sys. with old Army War Camp. Purchase and Hire. Approx. $28,000. Garrett Eng. Co., 1806 Milam St., Houston, engr.

Va., Bristol—City, concrete reservoir to Pope & Tipton, Bristol, $34,571. Bids 1/5. CD 2 3—ENR 2/17, under LB.

Wash., Bremerton—North Perry Ave. Water Dist., Bremerton, 13,000 ft. watermain for L. I. D. No. 2, to Frank Bishop & Co., Inc., 12519 15 Ave. N. E., Seattle, $33,115. E. A. Duffy, Lowman Bldg., Seattle, engr.

B. C., New Westminster—Canadian Forest Products Ltd., 510 W. Hastings St., Vancouver, 100,000 gal. water tank, Brand St., to Western Steel & Bridge Ltd., 145 W. First Ave., Vancouver, $50,000. Pearson & Phillips, 1701 W. Broadway, Vancouver, engrs.

Ont., Wallaceburg—Utilities Comm., Wallaceburg, 2 stations at waterworks plant, to Sterling Constr. Co., 2492 Sandwich St., Windsor, $55,000.

Que., Mont Laurier—Municipality, watermains, to St. Laurence Excavating Co. Ltd., 7162 Blvd. St., Laurent, Montreal. Est. $100,000. J. A. Lalonde & Co. Ltd., 958 Dunlop Ave., Outremont, engr.

SEWERS, WASTE DISPOSAL

BIDS ASKED

March 3

Tex., San Antonio—City, relief sanitary sewer S. Alamo and S. St. Marys to Broadway and 12 Sts. $149,000. H. R. F. Helland, 302 Frost Bank Bldg., engr. CD 12/15 47—ENR 12/25/47.

March 7

Calif., Stockton — Pacific Gardens Sanitary Dist., c/o Bd. Supervs., San Joaquin Co., Courthouse, vitr. clay sanitary sewers and sewage pumping plant. Over $50,000. Plans deposit $25. H. C. Holman, 234 W. Harding Way, Stockton, engr.

Ore., Newberg—City, City Hall, sewage treatment plant. Plans deposit $25. John W. Cunningham, Spalding Bldg., Portland, engr. CD 12/21/44—ENR 1/11/44.

March 22

Calif., Watsonville—City, City Hall, sewerage and outfall works extens., incl. sanitary sewers, storm water sewers, pumping units, outfall pipeline, chlorinator house and chlorinators. Over $50,000. Plans deposit $25. H. B. Kitchen, City Hall, city engr. CD 5/27 47—ENR 6/12/47.

LOW BIDDERS

Pa., Phila.—Dpt. P. Wks., City Hall Annex, Feb. 11, sewers various locations, Schedules A-4 and B-3, from A. DiPolo, 512 E. Walnut Lane, $64,869. CD 1/31—ENR 2/3.

Ill., Chicago—City, Dpt. Purchases, Contracts & Supplies, City Hall, Auxiliary Outlet Sewer, Beverly-Calumet Sys., 112 and 115 Sts. between Laflin and Longwood Contr. 1-48, to Santucci Constr. Co., 5044 Carol St., Skokie, $969,870. Est. $970,000. CD 12/23—ENR 12/30, under LB.

Ont., Fort William—Municipality, sewers, day labor, $60,000. W. E. McLennan, acting city engr. CD 2/5/48—ENR 2/19/48.

CONTRACTS AWARDED

Va., Radford—City, City Hall, incinerator, to Trickle & Dobins, Dublin, $76,177. CD 11/1/45—ENR 11/29/45.

Que., L'Epiphanie—Municipality, sewers, to Moise Rivest, L'Epiphanie, Est $80,000. J. A. Lalonde & Co. Ltd., 958 Dunlop St., Outremont, engr.

Que., Mont Laurier—Municipality, sewers, to St. Lawrence Excavating Co. Ltd., 7162 Blvd. St. Laurent, Montreal. Est $175,000. J. A. Lalonde & Co., Ltd., 958 Dunlop Ave., Outremont, engr.

BRIDGES

BIDS ASKED

March 4

N. J., Bridgeton—Bd. Freeholders, Cumberland Co., Bridgeton, bridge over Cohansey River, Commerce St. $150,000. Edward H. Maier, Bridgeton, engr. CD 4/1/47—ENR 4/17/47.

March 8

New York—Comr. Parks, at office Dpt. Parks, Arsenal Bldg., Central Park, 64 St. and 5 Ave., New York, Zone 21, grade separation at Cross Bay Blvd. and Conduit Blvd. (Southern Parkway); grading, drainage, lighting and paving portions Cross Bay Blvd., Conduit Bldg. (Southern Parkway) and North and South Conduit Aves. etc., Contr. No. Q-96-148, Queens Boro. Plans deposit $20.

LOW BIDDERS

Michigan—State Hy. Dpt., Lansing, Feb. 10, bridge carrying Addison Ave. over Edsel Ford Expressway, in Detroit, UI 1623 of S2 22-10 C-1, Wayne Co., from Darin & Armstrong, Inc., 2041 Fenkell Ave., Detroit, $282,416.

●**New York**—Bureau Contracts & Accounts, Albany, Feb. 16, 6 bridge substructures, Cross Bronx Expressway, Contr. 3 A. (Longfellow Ave.-Harrod Ave.), Bronx Co., from Rusciano & Sons Corp., 728 E. 212 St., New York, $3,372,919 est. $3,376,400. CD 2/2—ENR 2/10***2,144 ft. deck span concrete, paving 41 mi. North Hempstead Turnpike, Nassau Co., from Hendrickson Bros., Inc., 63 N. Central Ave., Valley Stream, $478,887 est. $567,000***bridge, 1.74 mi. Woodville-Shore Rd., Ellisburg-Woodville S. H. 8019, Jefferson Co., from Morris C. Soper Constr. Co., 140 Clinton St., Watertown, $459,453 est. $485,000***bridge, 5.24 mi. Dresden-Geneva, Pt. 2, S. H. 1704, Ontario Co., from Serafini Constru. Co. Inc., Conklin Rd., Binghamton, $752,277 est. $762,000***bridge, 0.4 mi. Orchard Park-East Aurora, S. H. 1066, Erie Co., from Wilkes Contg. Co., Inc., Buffalo, $291,636 est. $300,000***bridge, bit. 7.22 mi. Honeoye Falls-Monroe Co. Line, Monroe Co. Line-W. Farmington, Monroe and Ontario Co. Line from Potter-DeWitt Corp., Pavilion, $419,170 est. $432,000***bridge, 4.26 mi. Lake Ontario State Park, Sect. A, Monroe Co., from S. J. Groves & Sons Co., Nedrow, $1,625,115 est. $1,656,000***bridge over Poultney River, Whitehall-Fair Haven, S. H. 1542, Washington Co., N. Y., and Rutland, Vt. from D. A. Collins, Mechanicville, $850,193 est. $261,000***bridge and b. conc., bit. 6.01 mi. Stockholm Ctr.-Lawrenceville Pt. 1, St. Lawrence Co., from Law Bros. & A. J. Leaf, Herkimer, $782,276 est. $803,000***cancelled bids to have been opened Feb. 16, bridge S. H. 49-4; S. H. 49-6; S. H. 49-7 Ulster and Sullivan Counties***received no bids Feb. 17, bridge Cross Bronx Expressway, Contr. 2X, FA. CBE. 49-3, Bronx and New Co.***bridge alterations Cross Bronx Expressway, Contr. 3, FA. CBE. 49-4, Bronx and New York Counties. CD 1/24—ENR 1/27.

North Dakota—State Hy. Dpt., Bismarck, rejected bids for 2 bridges, Structural, ER-S-25 (1), Grand Forks Co.; underpass structure, etc., FAGM-290 (10), McHenry Co., L. B. $383,589. CD 2/16—ENR 2/24, under LB.

Texas—State Hy. Comm., Austin, Feb. 15, Cotton Avenue overpass, approaches in El Paso on Hy. U. S. 54, Proj. F. G. 784 (5), El Paso Co., from Bell, Braden, Barker & Gilvin, Inc., Herring Hotel Bldg., Amarillo, $412,378***Little Brazos River Bridge, approaches, Hy. U. S. 79, F. 400 (3), Robertson Co., from Norman Co., Lafayette, 2419 Jarratt Ave., Austin, $121,505. CD 1/26—ENR 2/3.

Virginia—State Hy. Dpt., Richmond, Feb. 15, bridge over Shenandoah River and approaches on Route 12, Page Co., from Echlos Bros., Staunton, $282,080**bridge and c. conc. surf. 2.52 mi. Route 58, Mecklenburg Co., from Ralph E. Mills Co., Inc., 1210 Tennessee St., Salem, $220,381***overpass at A. C. L. Railroad Crossing and 0.59 mi. approaches on Route 10, Chesterfield Co., from W. F. Magann Corp., 242 High St., Norfolk, $67,634. CD 1/27—ENR 2/3.

CONTRACTS AWARDED

●**Delaware**—State Hy. Dpt., at office W. W. Mack, dir. Delaware Crossing Div., Continental American Bldg., Wilmington, to American Bridge Co., 71 Broadway, New York, N. Y., Contr. 4, towers and suspended steel work for Delaware Memorial Bridge over Delaware River, Wilmington Co., $6,119,300; Contr. 5, cables and suspenders, $2,311,985; Contr. 6, approach superstructure steelwork, $5,402,011. Grand total $13,843,296. CD 1/27—ENR 2/3, under LB.

Ill., Chicago—City, City Hall, Chicago River and Canal St. Bridge, to Simpson Constr. Co., 1113 S. Hermitage St. $209,500. Awarded 2/7.

Kentucky—State Hy. Dpt., Frankfort, steel superstructure and conc. flooring for bridge, Union Star-Stephensport Rd., S 89 (2)-2 SP 14-193 Breckinridge Co., to Nashville Bridge Co., foot of Shelby Ave., Nashville, Tenn., $158,975***bridge, grade, drain, traffic bound limestone 3.647 mi. Hopkinsville-Dawson Springs Rd., S 372 (4) SP (24-285) (54-260), Christian and Hopkins Counties, to Harry C. Wyse 308 S. Hanover Ave., Lexington, $294,476***bridge, grade, drain, traffic bound limestone 0.259 mi. Cave City-Sulphur Well Rd., S 250 (5), SP 85104, Metcalfe Co., to Ruby Constr. Co., Madisonville, $105,717. Grand total $559,167. Bids 2/11. CD 1/26—ENR 2/3.

STREETS AND ROADS

BIDS ASKED

March 3

Neb., Ogallala—City and Dpt. Roads & Irrigation, at office F. J. Sibal, city clk., City Hall, c. conc. on Proj. Nos. 224-D and 286-B State Road.

March 15

†**Tenn., Oak Ridge**—Roane Anderson Co., Attention: F. C. Feld, Asst. Chief Purch. Agt., P. O. Box 456, Group I roadway and sidewalk imprvs. for city roads and lanes, concrete entrance sidewalks and steps to dwelling units, Inv. No. 49-10. Plans deposit $50; adv. ENR 2/24.

LOW BIDDERS

Michigan—State Hy. Dpt., Escanba, graveling M-94, and M-149, Schoolcraft Co., from C. G. Bridges, Escanba, $58,315.

Michigan—State Hy. Dpt., Lansing, Feb. 10, aggregate surf. 2.601 mi. M 66 from turn E of McBain to McBain E. limits, SS 57-11 C-3, Missaukee Co., from Ivan W. Schwoon, Thompsonville, $61,778***c. conc., 4.342 U. S. 12, UFI 38-48 C-2, Jackson Co., from Lewis & Frisinger Co., 214 E. Madison St., Ann Arbor, $518,799***c. conc. 1.572 mi. U. S. 27 relocation, FE 16-29 C-2, and c. conc., b. conc. resurf. course 0.515 mi. U. S. 27, FE 16-12 C-3, Cheboygan Co., from Hodgkiss & Douma, P. O. Box 311, Petoskey, $172,246. CD 1/26—ENR 2/3.

New York—Bureau Contracts and Accounts, Albany, b. conc. 1.11 mi. Delaware Ave. city of Buffalo, Nottingham Terrace to Tacoma Ave., Erie Co., from Rock Asphalt Inc., 223 Erie St., Buffalo, $246,172 est. $248,000***b. conc. 12.48 mi. Romulus Ct.-Asbury Cors. County Road 148, Reservation Road-Varick S.H. 321, Reservation Road-Fayette S.H. 320, Seneca Co., from Hero Eng. & Constr. Corp., McKinley Bldg., Buffalo, $539,881 est. $603,000***b. conc. 3.39 mi. Oakwood-Half Acre; Half Acre-Webster Cors., Cayuga Co., from J. R. C. Constr. Co. Inc., Lansing, Ithaca, $345,044 est. $348,000 CD 1/24—ENR 1/27.

N. D., Edgeley—City, City Hall, rejected bids Jan. 6, paving, L. B. $142,000. CD 1/26—ENR 2/3, under LB.

North Dakota—State Hy. Dpt., Bismarck, rejected bids Feb. 11, base and b. conc. 13.924 mi. State Hy. 25, F. 686 (2), F-235 (12) and S-135 (2), Mercer and Oliver Counties, L B $453,952. CD 2/16—ENR 2/24, under LB.

●**Tennessee**—State Hy. Dpt., Nashville, cancelled following contracts

Foster and Creighton, Hamilton Co., $651,672.
R. B. Tyler Co., Anderson Co. $657,135.
Wesco Paving Co., Hamblen, Hawkins, and Greene Counties, $784,502. Rhea and Roane Counties, $723,800.
Stacy Bros. Co., Sevier Co., $233,475.
Wright Contg. Co., Marion Co., $516,506. CD 1/4—ENR 1/13. Williamson and Davison Counties, $483,721. CD 11/24—ENR 12/2.
Ralph Rogers Co., Marshall, Williamson and Rutherford Counties, $390,796.
Memphis Stone & Gravel Co., Tipton and Haywood Counties, $736,718.
Bowyer & Johnson, Sharp Co., $633,581.
A. B. Burton, Sullivan Co., $268,067. Contractors asked to sign waivers. CD 12/2—ENR 12/9, under LB.

Texas—State Hy. Comm., Austin, Feb. 15, stabilized fdn. course, single asph. 8.121 mi. Hy. FM 487, Proj. S 1119 (3), Ellis Co., from E. E. Ruby, San Marcos and W. L. Barnes & Norman L. Larson, 2411 Jarrat St., Austin, $95,548***c. conc. 6.675 mi. Hy. U. S. 176, F. 860 (6) and F. 139 (7), Dallas and Kaufman Counties, from Texas Bitulithic Co., P. O. Box 5297, Dallas, $313,186***stabilized fdn. course, single asph. 7.61 mi. Hy. FM 543, Proj. S-920 (4), Collin Co., from Ernest Loyd, P. O. Box 1120, Fort Worth, $104,162***flexible base, asph. 10.493 mi. Hy. U. S. 81, F. 166 (9), Live Oak Co., from E. E. Hoed & Son, 511 Barrett Ave., San Antonio, $108,816***flexible base, double asph. 17.662 mi. Hy. St. 22, Proj. F 651 (5) and (6), Hamilton and Bosque Counties, from Houston Clinton, Burnet, and M. D. Corbin, 2824 Colonial Ave., Waco, $240,724***seal coat, 79.28 mi. Hy. U. S. 60, 54, St. 51, 152, 170 and FM 694 and 695, Proj. C-168-7-9, Deaf Smith, Oldham, Hartley, Gray, Donley, Hemphill and Dallas Counties, from Ned B. Hoffman, 817 Fort Worth Club Bldg., Fort Worth, $76,746***base and double asph. 4.26 mi. FM 563, V. 1023-3, Chambers Co., from H. R. Henderson & Co., P. O. Drawer 313, Marshall, $56,588. CD 1/26—ENR 2/3.

†**Virginia**—Pub. Roads Admin., 1440 Columbia Pike, Arlington, Feb. 15, gravel or stone base course, Part A, Proj. ILI, Blue Ridge Parkway, Botetourt and Bedford Counties, from W. E. Graham & Sons, Cleveland, N. C. $359,763. CD 1/26—ENR 1/27.

Virginia—State Hy. Dpt., Richmond, Feb. 15, macad. 1.53 mi. Route 19 from 0.3 mi. N. Washington-Russell Co. line to 0.14 mi. east Int. Rt. 64, Russell Co., from Wiley N. Jackson Co., R.F.D. 4, Roanoke, $81,832***macad surf. tr. 1.15 mi. St. Routes 130 and 501, Amherst Co., from Ralph E. Mills Co., 1210 Tennessee St. Salem, $166,632***bit. stab. base surf. tr. and bridge 3.73 mi. Route 644 Nansemond Co., from Virginia Eng. Co., Newport News, $56,811. CD 1/27—ENR 2/3.

CONTRACTS AWARDED

Ia., Vinton—Bd. Supervs. Benton Co., Court House, surf., resurf. 635 mi. roads, to B. L. Anderson Constr. Co., 26 Guaranty Bldg., Cedar Rapids, $231,819. Bids 2/7. CD 1/31.

Kentucky—State Hy. Dpt., Frankfort, traffic bound limestone 2.818 mi. Cody-Kite Rd., SP 60-138, Rockcastle Co., to Licking River Limestone Co., West Liberty, $77,028, traffic bound limestone 2.061 mi. Maysville-Brooksville Rd., S7 (2), SP 81-215, Mason Co., to George H. Cheek,

(Continued on page 47)

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(Continued from page 41)

McClure Bldg., Frankfort. **$132,065.** Bids 2/21. CD 1/26—ENR 2/3.

Maryland—State Hy. Dpt., Baltimore, relocating 3.859 mi. State Rt. 404, -by-passing Queen Anne and Hillsboro beginning 1 mi. West of Queen Anne and extdg. southeasterly toward Denton. Proj. 4 224-1-215 and Co. 173-1-215, Queen Anne and Caroline Counties, to George Lynch, Inc., 18 and Broome Sts., Wilmington, Del., **$535,420.** Bids 1/18, awarded 2/11. CD 1/26—ENR 2/3, under LB.

Pennsylvania—Pennsylvania Turnpike Comm., Harrisburg, grading, drainage structures 4.31 mi. Turnpike Sec. 23B, part of Philadelphia Extens., from 0.21 mi. southeast of the juncture of TR 341 and Twp. Rd. 566, easterly to point near the Dauphin-Lebanon Co. line, Dauphin and Lebanon Counties, to J. H. Williams Co., York, **$938,570.** Bids 1/24, awarded 2/14. CD 1/26—ENR 2/3, under LB.

Tex., Clifton—City, J. L. Standefer, mayor, farm-to-market road between Clifton and Cranfills Gap, force account. **$78,000.** CD 4/28—ENR 5/13.

Tex., Crosbyton—Crosby Co., M. Pierall, judge, asph. road south from Crosbyton, force account. **$80,000.**

Tex., Kenedy—Karnes Co., W. S. Pickett, judge, Karnes City, farm-to-market road constr. between Kenedy and Overby, partial **$110,000;** partial route between Falls City and Dewessville, **$145,000,** force account, C. C. Klumpp, Kenedy, engr.

Tex., Wills Point—Van Zandt Co., Courthouse, Canton, farm-to-market road in Dist. 6, force account. **$110,000.**

Ont., Fort William—Municipality, concrete sidewalk, road leveling, own forces, **$65,000.** W. E. McLennan, acting city engr.

EARTHWORK, WATERWAYS

BIDS ASKED

March 1

†**Colorado**—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, structural steel roof framing for Granby Pumping Plant, Spec. R 7-43 (Region 7). L. N. McClellan, ch. engr.

March 4

†**Florida**—U. S. Eng., P. O. Box 4970, Jacksonville, sandblasting and painting sector gate at Hurricane Gate 4, Lake Okeechobee levee near Belle Glade, Caloosahatchee River and Lake Okeechobee Drainage Areas, Inv. No. Eng-08-122-49-64.

March 17

●†**California**—U. S. Eng., War Dpt. Bldg. T-7, Gravelly Point, Va., breakwater extens., Crescent City Harbor. $2,000,000-$3,000,000.

†**New York**—U. S. Eng., Engineer Park, Buffalo, Zone 7, maintenance dredging, Buffalo River and ship canal, Buffalo Harbor, Serial No. Eng-30-023-49-43.

LOW BIDDERS

†**Maryland**—U. S. Eng., 21 St. and Virginia Ave. N. W., Wash., D. C., Jan. 19, maintenance dredging, Pocomoke River, (The Mudso, Somerset Co., and Fishing Bay, Dorchester Co., Serial No. Eng. 78-020-49-51, from Norfolk Dredging Co., Campostella Wharf, Norfolk, Va., **$102,423,** Est. $89,496. CD 1/11—ENR 1/13.

New York—Bureau Contracts & Accounts, Albany, Feb. 16, Proposals 1 and 2, 11 flood control barricades in Villages of Avoca, Painted Post and city of Corning, Steuben Co., Proposal 1, from Hornell Constr. Co., Hornell, **$93,238;** Proposal 2, from A. L. Blades & Sons, Hornell, **$73,637.** CD 2/10.

AIRPORTS AND AIRBASES

BIDS ASKED

March 1

Neb., Valentine—AIRPORT—City, airport, $65,230. CD 8/18—ENR 8/26, under LB.

LOW BIDDERS

Ala., Auburn—AIRPORT—City, Feb. 10, airport imprvs., incl. administration bldg., etc., from A. C. Samford, Inc., Albany, Ga., **$95,597.** CD 1/27—ENR 2/3.

CONTRACTS AWARDED

Ga., Columbus—AIRPORT BLDG.—Muscogee Co., Columbus, administration bldg. at Muscogee Co. Airport, to Jordan Contr. Co., Andrews Rd., Columbus, **$393,333.** Bids 2/9. CD 1/17—ENR 1/27.

North West Territories, Aklavik—LANDING STRIPS—Dominion Govt., Dpt. Transport, Ottawa, Ont., landing strip, etc., day labor, **$50,000.**

PUBLIC BUILDINGS

BIDS ASKED

March 3

Ill., East St. Louis—Bd. Educ., School Dist. 189, St. Clair Co., J. H. Steuernagle, secy., 240 N. 6 St., 2 story, brick, concrete Washington School addn., 11 and Piggott Aves., $250,000. Plans deposit $25. S. T. Pabst & Assoc., 238 Goldman Bldg., archts., CD 2/11—ENR 2/17.

March 4

Mass., Taunton—C. A. Oliver, mgr., Taunton Municipal Lighting Plant, Taunton Municipal Lighting Plant Bldg., nile fdns. for addn approx. 30 ft. x 90 ft., 35 ft. high switch bay and office, on West Water St. Power Plant. Plans deposit $20; adv. ENR 2/24.

Mass concrete of stiff consistency containing unusually large, coarse aggregate can be placed faster, more effectively and at lower cost with this vibrator. Greater density with better bond between lifts in the more economical mixes is achieved. Rugged and trouble-free, the VS-4 has a wonderful record on a host of dam projects.

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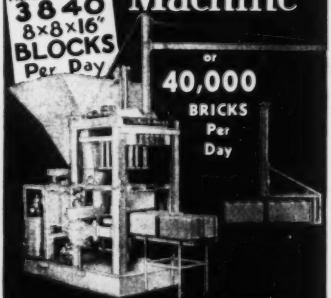

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March 7

Calif., Vallejo—Bd. Educ., High School Bldg., rein.-con. steel trusses boys and girls gymnasium, lockers, showers at Franklin Jr. High School. Over $250,000. Plans deposit $25. Harry J. Devine, 1012 Jay St., Sacramento, archt.

March 8

†**Ga., Fort Benning**—U. S. Eng., P. O. Box 1169, Mobile, 7, Ala., one classroom bldg., Serial No. Eng-01-076-49-111. Extended date. CD 1/24—ENR 1/27.

Md., Towson—Baltimore Co. Bd. Educ., Washington and Susquehanna Aves., 2 story, brick Gray Manor School. Over $300,000. Plans deposit $10. Gaudreau & Gaudreau, 527 N. Charles St., Baltimore, archts. CD 8/27—ENR 9/16.

Mo., St. Joseph—At Office Samuel Marsh, dir. State Dpt., P. Health & Welfare, Jefferson City, brick, concrete, stone infirmary bldg., for aged patients, State Hospital 2. Over $300,000. Extended date. Everett Johns, Empire Bldg., engr. CD 2/7—ENR 2/17.

Ore., Portland—Bd. Higher Educ., University of Oregon, Eugene, 3,200 sq. ft. steel frame outpatient clinic addns. to University of Oregon Medical School. Plans deposit $25. Lawrence, Tucker & Wallmann, Failing Bldg., archts. CD 6/29/45—ENR 7/12/45.

March 9

Ore., Nyssa—School Dist. No. 26-C, Nyssa, 8 classroom, brick veneer over frame and brick veneer over concrete Junior High School and gymnasium. Plans deposit $100. Graham B. Smith, Eugene, archt.

●**Pa., State College**—Harbeson, Hough, Livingston & Larson, archts., 117 S. 17 St., Phila., 3 men's dormitories, for Penna. State College, State College. $4,000,000. Extended date. Sauter & Castor, 1411 Walnut St., Phila., engrs. CD 1/24—ENR 1/27.

March 10

Calif., Temple City—Pasadena City School Dist., 351 S. Hudson Ave., Pasadena, six 1 story, frame stucco school bldgs. at Temple City High School. $250,000. Plans deposit $25. Fredrick Kennedy, Jr., 1041 E. Green St., Pasadena, archt. Serge Kolesoff, 117 E. Colorado St., Pasadena, engr.

O., Bexley (Br. Columbus)—Bd. Educ., Bexley, 1 story, bsmnt., U-shaped, 490,000 cu. ft. stone, rein.-con. structural steel, Bexley School. $600,000. Sims, Cornelius & Schooley, 2901 N. High St., Columbus, archts. CD 11/11—ENR 11/25.

March 17

O., Columbus—Dpt. Pub. Wks., Columbus, 2 story, bsmnt., 50x242 ft. main structures of agricultural laboratory; 1 story, 72x120 ft. creamery wing, with addnl. refrigeration units in small bsmnt. area; 48x62 ft. auditorium wing, extending through bsmnt. and first story, at Ohio State University. $960,000. Plans deposit $25. Howard Dwight Smith, 100 Brown Hall, Ohio State University, Columbus, university archt. CD 5/28/45—ENR 6/14/45.

March 22

†**Alaska, College**—L. W. Friberg, div. engr., 123 U. S. Courthouse, Seattle 4, Wash., 3 story, 52x122 ft. laboratory and six 1 story residences for geophysical institute for Pub. Bldgs. Admin., 18 and F Sts., Wash. 25, D. C. Est. $975,000. Bid date changed. CD 1/31—ENR 2/3.

LOW BIDDERS

Ala., Eufala — City, 2 high school addns., from Jones & Hardy, Montevallo, **$322,994.**

●**Calif., Berkeley** — Regents University of California, Berkeley, Feb. 18, 4 story, 100,000 sq. ft., rein.-con. engineering bldg., from James I. Barnes Constr. Co., 1110 Montana Ave., Santa Monica, **$1,084,000.** CD 1/4—ENR 1/14.

†**Del., Wilmington**—U. S. Eng., 121 N. Broad St., Phila., 1, Pa., Feb. 8, consolidated quarters apartment for Veterans Admin., 765 Alington Blvd., Wash., D. C., from Virginia Eng. Co., 80 W. 29 St., Newport News, Va., **$416,200.** (**Correction**—low bidder.) CD 12/16—ENR 2/24, under LB.

●**N. Y., Thiells**—Bureau Contract & Accounts, Albany, general contract, 4 infirmary bldgs. at State Hospital for Dpt. Mental Hygiene, from Cauldwell-Wingate Co., 101 Park Ave., New York, Zone 17, **$2,912,000;** heating and ventilating, from John W. Danforth Co., 70 Ellicott St., Buffalo, **$371,326.** CD 1/20—ENR 2/3.

Pa., Lima — Comrs. Delaware Co., Media, hospital addns. and bldg. for women, from Wintz Bros., 1618 Sellers St., Phila., **$356,760.** CD 9/9—ENR 9/23.

●**Tex., Bryan** — City, Feb. 11, installing and providing two 5,000 each kw. steam turbines, generators, boilers, etc., from Mann Electric Co., 808 Blodgett St., Houston, **$1,379,000;** power house and equip. installation, from Thos. Bryan & Assoc., M & M Bldg., Houston, **$484,835.** CD 12/21—ENR 12/30.

†**Tex., Camp Hood** — U. S. Eng., 606 Santa Fe Bldg., Galveston, cancelled bids to have been opened about March 1, rehabilitation facilities for National Guard, North Camp Hood, near Belton, incl. rehabilitating 8 apartments, 1 community bldg., 4 warehouses, rehabilitating, remodeling 1 maintenance shop, etc., Inv. No. Eng-41-243-49-218. CD 2/9—ENR 2/17.

(Continued on page 50)

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GENERAL OFFICES—ALLENTOWN, PENNA., U.S.A.
MANUFACTURERS OF THE "CEMENT GUN"

(Continued from page 48)

Tex., Falfurrias—Brooks County Independent School Dist., c/o H. L. Clifton, supt., Feb. 3, 8 room school. Encino; 16 room school, Falfurrias, masonry, concrete, steel, from Arthur Bros. Constr. Co., Falfurrias, $289,992. CD 1/12—ENR 1/27.

CONTRACTS AWARDED

Calif., Ukiah — Ukiah Elementary School Dist., Ukiah, 1 story, wood frame school, Giobbi and Dora Sts., to Frank M. Crane 4 Banker Blvd., $253,150. Ernest Rick Winkler, 251 Post St., San Francisco, archt.

Ill., Chicago — Chicago Bd. Educ., 228 N. La Salle St., general contract, 2 story, brick, stone, concrete, steel, Lindblom Technical High School addn., to Coath & Goss, 5103 W. Lake St. Total est. $840,000. J. C. Christensen, 228 N. LaSalle St., archt. CD 3/30/45—ENR 4/19/45.

N. Y., Dongan Hills — New York City Housing Auth., 63 Park Row, New York, Zone 7, foundations, appurtenances for Charles W. Berry Houses, Proj. NYC-19, in area bounded by Dongan Hills Ave., Richmond Rd., new street 200 ft. north of and parallel to Stobe Ave. and new street connection North Railroad Ave and Jefferson St., Richmond Boro, to Foss-Halloran-Nace, Inc., 29-28 41 Ave., Long Island City. $575,000. Bids 1/11. CD 12/22—ENR 12/30.

●**N. Y., New York**—Bd. Transportation, 250 Hudson St., Zone 13, general building constr. work for 59 Street Power Plant, New York City Transit Sys., to Grove, Shepherd, Wilson & Kruse, Inc., 247 Park Ave., Zone 17, $2,110,000. Bids 1/28. CD 2/1—ENR 2/10, under LR.

Ore., Portland — Multnomah Co., Courthouse, Juvenile home, to L. H. Hoffman, 715 S.W. Columbia St., Portland, $980,142. Bids 2/11, awarded 2/9. CD 2/8—ENR 2/17, under LR.

Que., LaMalbaie — Province of Quebec, Quebec City, concrete, cement block garage for Dpt. Roads, to N. Tremblay, 14 Church St., La Malbaie. Est. $75,000. Romeo Sabrary, c/o owner, engr.

COMMERCIAL BUILDINGS

BIDS ASKED

March 4

Md., Baltimore—Beth El Congregation, 1607 Munsey Bldg., (selected list of bidders) stone, steel, brick, rein.-con. synagogue and school, Hilton St. and Dorothann Rd. Over $500,000. Eric Mendelsohn, 627 Commercial St., San Francisco, Calif., archt. CD 1/15—ENR 2/5.

March 7

●**Pa., Pittsburgh**—Carnegie Institute of Technology, Schenley Park, 3, 4, and 5 story irregular shape brick, steel engineering hall addn., 1 wing addn. to present bldg. $1,000,000. Frances Keally, 139 E. 53 St., New York, N. Y., archt. Palmgreen, Patterson & Fleming Law and Finance Bldg., assoc. archts. CD 9/18/46—ENR 10/3/46.

March 8

Ala., Homewood—Trinity Methodist Church, c/o Warren, Knight & Davis, archts., Protective Life Bldg., Birmingham, church. Over $250,000.

March 15

Tenn., Memphis—Methodist Hospital, c/o Walk C. Jones-Walk C. Jones, Jr., 1215 Poplar St., archts., hospital addn. $500,000.

March 22

Idaho, Boise—St. Lukes Hospital, J. and Bannock Sts., 3 story hospital addn. $600,000. V. N. Jones & Assoc., Republic Bldg., Seattle, 1, Wash., archts. CD 8/19—ENR 8/26.

Bids Asked

●**N. J., Collingwood**—Sylvester A. Lowery, 1716 W. Cheltenham Ave., Phila., Pa., apartment development Collings Rd. $10,000,000. J. Raymond Knopf, 505 Cooper St., Camden, archt. Robert McLaughlin, 1411 Walnut St., Phila., Pa., engr.

Tex., Austin—Southwestern Bell Telephone Co., 308 S. Akard St., Dallas, 15,000 sq. ft. solid masonry, Spanish type architecture telephone bldg. $375,000. CD 10/13—ENR 10/26.

SOON LETS CONTRACT

Ky., Lexington—College of the Bible, 441 W. 2 St., soon lets contract administration bldg., library, $600,000. Hugh Meriwehter, 236 E. Short St., archt.

Pa., Clearfield—Clearfield Hospital, Clearfield, soon lets contract hospital. $506,000. Chrisfield & Schlicher, 324 W. Chelten St., Phila., hospital consultant. James R. Mays, 324 W. Chelten Ave., Phila., engr. CD 2/3—ENR 2/10, under LR.

Tex., Fort Point (Port Neches P. O.)—Aluminum Co. of America, L. F. Schalles, purch. agt., 801 Gulf Bldg., Pittsburgh, Pa., soon lets contract 2 story, brick, hollow tile, office, concrete pier and beam slab fdn., air-conditioning, $250,000. Wyatt C. Hedrick, 5201 Fanin St., Houston, engr. and archt.

Ont., St. Catherines — Marani & Morris, archts., 1250 Bay St., Toronto, soon lets contract infirmary and memorial hall for Ridley College Rd., St. Catherines. $250,000. Wiggs & Assoc., 1411 Crescent St., Montreal, engrs.

Que., Magog—Roman Catholic Parish of St. Margaret, St. David St. Rev. O. Vel. St. David St., soon lets contract 83x166 ft. concrete, brick, stone church, for $300,000. J. A. & J. Poulin, 63 Prospect St., Sherbrooke, archts. Brouillet & Carmet, 3605 St. Denis St., Montreal, engrs. CD 11/27/46—ENR 12/5/46.

LOW BIDDERS

Fla., Marathon—Jack Worth, Marathon, rejected bids Nov. 4, apartment development, L. B. **$892,890.** CD 1/21—ENR 11/18, under LB.

CONTRACTS AWARDED

Ala., Birmingham—East Thomas Development Co., 815 13 St., North, 75 apartment units, 10 St., to Wood Lumber Co., c/o owner. Est. over **$250,000.**

Ala., Montgomery—Estate of Dr. T. B. Hill, c/o contractor, 4 story office, to Bear Brothers Co., 25 E. Jefferson St. Est. over **$250,000.**

Fla., Miami—Homecraft Corp., 2870 S. W. 36 Ave., several residential developments. Owner builds. Over **$250,000.**

Ga., Columbus—Columbus Plastering Co., 2005 12 Ave., 200 homes, near Baker Village. Owner builds. **$900,000.**

Ill., Chicago—Jewel Tea Co., 3617 S. Ashland St., 100x200 ft., brick receiving bldg., to Dahl Stedman Co., 11 S. La Salle St. Est. **$300,000.** Carr & Wright, Inc., 333 N. Michigan St., archt.

Ind., Indianapolis—Herman B. Gunneman, 2275 Madison Ave., retail shopping center, incl. drug store, variety store, hardware store and 5 other store rooms, movie theatre, 1 story each, brick, rein.-con. steel, parking lot, on 24 acre site Madison Ave. and Lawrence St., separate contracts. **$250,000.** CD 10/17/47—ENR 10/30/47.

Ia., Burlington—Belle Air Building Co., C. E. Yoder, pres., Burlington, 6 apartments, day labor, **$250,000.** S. A. Solheim, 324 Sharp Bldg., Lincoln, Neb., archt.

La., Natchitoches—Hotel St. Denis, c/o contractor hotel, to Southern Constr. Co., Lake Charles. Est. over **$300,000 (Correction**—contractor). CD 1/4—ENR 1/13, under CA.

La., New Orleans—Aronson Bros., 528 Broadway St., 30 houses, force account. Over **$300,000.**

La., New Orleans—Richards Apartments, Inc., c/o contractor, apartment development, to Shelby Constr. Co., 4320 Paris Ave., **$955,496.**

Pa., Aronimink (Drexel Hill P. O.)—Aronimink Village, Inc., 217 S. 69 St., Upper Darby, shopping center, separate contracts. **$250,000.** James G. Ludwig, 35 W. Market St., West Chester, archt.

Pa., Harrisburg—Catholic High School, c/o Rev. L. F. Schott, principal, 22 and Market Sts., 121x145 ft. two-level gymnasium auditorium, incl. brick, masonry, steel swimming pool and constructing extens. to high school classroom sect. of present bldg., 22 and Market Sts., to H. B. Alexander & Son, 315 Vaughn St. **$303,162.** Bids 2/7, awarded 2/14 CD 2/9—ENR 2/17.

●**Pa., Lewistown**—Lewistown Hospital, Lewistown, hospital addns., alterations, to C. C. Davis Constr. Co., 220 Bridge St., New Cumberland. **$1,154,400.** Bids 1/14. CD 1/26—ENR 2/3, under LB.

Pa., Phila.—Paul Trimholt, 951 E. Godfrey Ave., apartment, Hasbrook Ave., separate contracts. **$250,000.** Lewis J. Cowan, 1505 Pine St., archt.

Tenn., Memphis—John B. Goodwin Co., Commerce Title Bldg., 75 homes near Poplar and Highland Sts., own forces. Over **$500,000.**

Tex., Dallas—Magnolia Petroleum Co., Magnolia Bldg., unitry commercial bldg., separate contracts. Approx. **$500,000.** CD 2/8—ENR 2/17.

Tex., Houston—Rice Institute, c/o Bd. Trustees, M. Esperson Bldg., dormitory to W. S. Bellows Constr. Co., 716 N. Everton St. **$592,700.** Bids 2/2. CD 2/8—ENR 2/17, under LB.

Ont., Cornwall—Owner, c/o Vic. Abrams, 825 Pitt St., 50 dwellings, Riverdale Sub-Division. Owner builds. **$150,000.**

INDUSTRIAL BUILDINGS

BIDS ASKED

March 3

Mo., Poplar Bluff — GENERATING UNITS — M. & A. Electric Power Co-operative, Poplar Bluff. Sect. 1, 2 diesel generating units and piping covering. Maximum net Kw, Raring 2750, minimum 2360. Stanley Eng. Co., Hershey Bldg., Muscatine, Ia., engr.

March 8

La., New Orleans — BAKERY — Holsum Bakeries, Inc., c/o Dreyfous & Selferth, archts., Audubon Bldg., bakery addn.

SOON LETS CONTRACT

Ill., Chicago — PLANT — Sherwin-Williams Co., 300 W. Lake St., soon lets contract, 3 story, brick pilot bldg., Schmidt, Garden & Erikson, 104 S. Michigan St., archts.

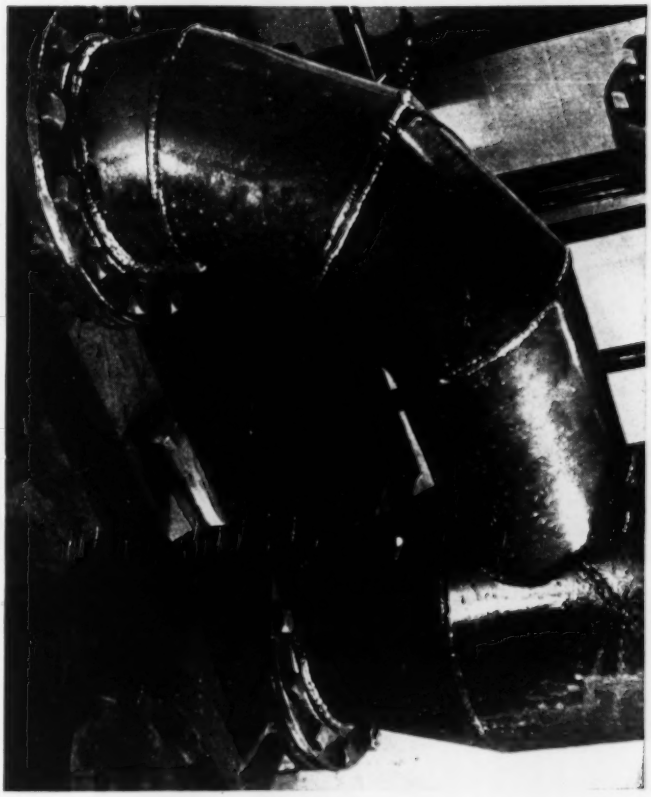
O., Toledo — WAREHOUSE — Owen Illinois Glass Co., Ohio Bldg., soon lets contract, 2 story, 306x378 ft. warehouse. Over $250,000. CD 3/8/46—ENR 5/16/46.

Pa., Phila. — PLANT — Sinclair Refining Co., 10 W. 51 St., New York, N. Y., soon lets contract 1 story brick bldg. $68,000. CD 1/12—ENR 2/3.

CONTRACTS AWARDED

●**Ala., Mobile**—MILL—The Ruberoid Co., 2400 Emogene St., felt mill. Owner builds. **$1,000,000.**

Calif., San Francisco—WAREHOUSE—Coast Grocery Co., Inc., 501 3 St., 2 story warehouse, to Greuner Constr. Co., 430 40 St., Oakland.



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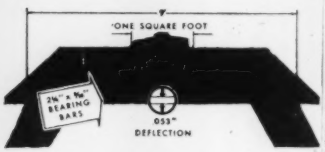

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Est. $125,000. George H. Jennings, 171 Buena Ave., Berkeley, engr.

●**Fla., Jacksonville** — PLANT — Lloyd A. Fry Roofing Co., 4818 S. Archer St., Chicago, Ill., complete mfg. plant, incl. factory, storage warehouse facilities, offices and loading facilities, to Campbell-Lowrie & Lautermilch Co., 400 W. Madison St., Chicago, Ill., **$2,000,000.** Awarded 2/10.

Fla., Jacksonville—PLANT—The Trumbull Asphalt Co., 5880 Archer St., Chicago, Ill., mfg. plant, Talleyrand Ave., to Campbell-Lowrie-Lautermilch Co., 400 W. Madison St., Chicago, Ill., over **$100,000.** Awarded 2/10.

Fla., Jacksonville—MILL—Volney Felt Mills, Inc., 5818 S. Archer St., Chicago, Ill., felt mill, Talleyrand Ave. near St. John's River and Fairway St., to Campbell-Lowrie-Lautermilch Co., 400 W. Madison St., Chicago, Ill., over **$100,000.** Awarded 2/10.

Ill., Blue Island—FACTORY—Briggs & Turavas, Inc., Western Ave. and 139 St., design and construction, 72x324 ft., brick, steel factory, to Abel-Howe, 53 W. Jackson Blvd., Chicago. Est. **$150,000.** Awarded 2/4.

●**Ind., Evansville**—PLANT—Seeger Refrigerator Co., J. W. Krueger, mgr., 225 W. Morgan St., 2 story bsmt., 240x529 ft., masonry, reinforced con., steel plant, near Garvin Park, to M. J. Hoffman Constr. Co., 1011 Hulman Bldg. Est. **$1,000,000.** Awarded 2/11. Carr & Wright, 330 N. Michigan Ave., Chicago, Ill., archts. CD 7/15—ENR 7/29.

La., New Orleans—WAREHOUSE, etc.—Shell Oil Co., 600 S. Jefferson Davis Parkway, warehouse and office, to Chris Larsen Co., Maritime Bldg. Est. over **$68,000.**

Mass., Norton—PLANT—Talbot Wool Combing Co., Elm St., 1 story, brick wood plant, Elm St. Owner builds. **$68,000.** CD 6/14/46—ENR 6/20/46.

Mich., Detroit—FACTORY—Ex-Cell-O Corp., 1200 Oakman Blvd., 1 story, steel concrete factory, to The Austin Co., 227 Curtis Bldg. Austin Engineers, Inc., 2842 W. Grand Blvd., engr. and archt. Awarded 2/11.

Mo., St. Louis—FACTORY—Food Equipment Corp., 2729 N. 9 St., Zone 6, altering 84x287 ft. factory and 19x287 ft. factory addn., 400 Humboldt St., to Murch-Jarvis Co. Inc., 718 Locust St., Zone 1. Est. approx. **$75,000.** H. T. Jarvis, 15 Holly Dr., Webster Groves, St. Louis, Zone 19, engr.

Mo., St. Louis—SUGAR REFINERY, etc.—Industrial Sugars, Inc., 4800 Miami St., Zone 16, 1 story, 100x120 ft., concrete, steel sugar refinery and warehouse, 25x30 ft. boiler room, 56 E. President St. to C. Rallo Contr. Co., 5000 Kemper Park, Zone 9. John A. Lorenz, 21 Newport Ave., Webster Groves, St. Louis, Zone 19, archt.

Mo., St. Louis—WAREHOUSE—Transamerican Freight Lines, 2500 N. Broadway, Zone 6, 1 story, 61x121 ft. steel reinforced warehouse addn., 2506 N. Broadway, to Willingham Constr. Co., 5701 Vernon Ave., Zone 12.

N. C., Drexel—MILL—Drexel Furniture Co., Drexel, mill addn. to Herman-Sipe Co., Conover. Est. over **$68,000.**

N. C., Wilmington—PLANT—The Lloyd A. Fry Roofing Co., 5818 S. Archer St., Chicago, Ill., plant for producing asphalt composition roofing, to Campbell-Lowrie-Lautermilch Co., 400 W. Madison St., Chicago, Ill. Est. **$750,000.** Awarded 2/10. CD 1/20—ENR 2/10.

N. C., Ramseur—PLANT—Owner, c/o contractor, 50,000 sq. ft. textile plant, to S. E. Truesdon, Asheboro. Est. over **$75,000.**

Ore., Eugene—WAREHOUSE—C. P. Tillman Co., 5th West and Charnelton Sts., 104x160 ft., reinforced con. warehouse, to W. H. Shields Co., 944 Madison St., **$150,000.** Bids 2/7. CD 1/26—ENR 2/3.

Pa., Harrisburg—PLANT—Harrisburg Steel Corp., 3 and Herr Sts., 70x216 ft. steel frame bldg. to house No. 2 Forge at plant, to Belmont Iron Wks., 22 and Washington Aves., Phila., **$91,000.** Kenneth Caskey, c/o owner, ch. engr.

Pa., Newtown—GARAGE, etc.—Joseph E. Lownes, Newtown, 1 story, 63x125 ft. and 1 story, 42x73 ft., masonry, steel garage and showroom, separate contracts, over **$70,000.** Fred F. Martin, West and Paine Sts., Doylestown, archt.

Pa., Phila.—MANUFACTURING—Michael Flynn Mfg. Co., 700 E. Godfrey Ave., 1 story, 73x355x184 ft., brick, steel mfg. bldg., to H. M. Shoemaker, 1619 Sansom St. **$70,000.** Widdicombe Eng. Co., 117 S. 17 St., engr.

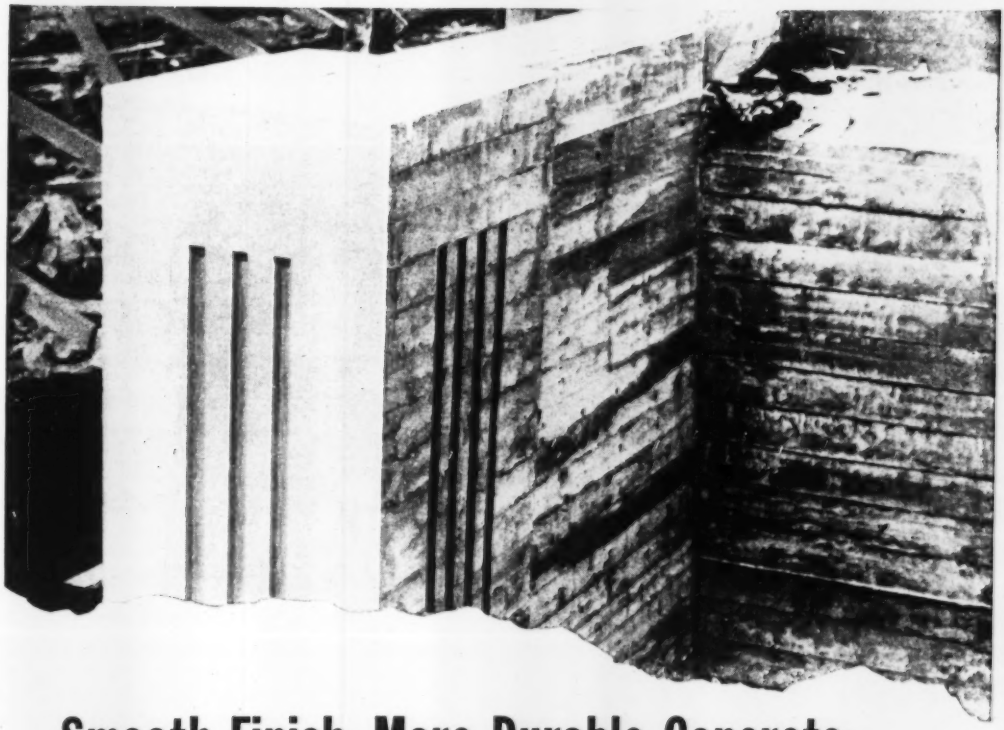
Pa., Pittsburgh—LABORATORY—Mine Safety Appliance Co., Braddock Ave., 2 story, brick, steel frame laboratory, to Navarro Corp., 6219 Broad St. Est. **$500,000.** Bids 2/3. CD 1/27—ENR 2/3.

●**Va., Richmond**—BAKERY, etc.—General Baking Co., High Point Ave. and Clay St., bakery and garage addns., Highland Ave., separate contracts. **$1,000,000.** Cowell, Robinson & Martin, 25 W. 43 St., New York, N. Y., engrs. and archts. CD 2/5/47—ENR 2/20/47.

Wash., Tacoma—STORAGE CELLAR—Columbia Breweries, 2120 South C St., 2 story, 58x70 ft., reinforced storage cellar to Robert Keiner, 419 St. Helens St. Est. **$100,000.** J. H. Wohleb, Olympia, archt.

N. B., Chipman—PLANT—L. E. Shaw Ltd., Chipman, plant extens. Owner builds. **$75,000.**

(Continued on page 54)



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(Continued from page 52)

Ont., Toronto—PLANT—Liberty Cherry Co. of Canada Ltd., Covington, Ky., U. S. A., 1 story, 85x180 ft. concrete, steel, brick plant, Gerrard St., to Sinclair-Ferguson Ltd., 1056 W. Eglinton St., Est. **$150,000.** G. L. Wallace, 35 Isabella St., engr.

Que., Montreal—PLANT—Montreal Motor Works Ltd., 5790 Notre Dame St. E., 40x175 ft. and 65x350 ft., rein.-con. steel, brick diesel locomotive shop, to Anglin Norcross Quebec Ltd., 892 W. Sherbrooke St. Est. **$300,000.** S. Comber & Son, 4444 Sherbrooke St. W., archts.

Que., Montreal West—WAREHOUSE—Owner, c/o P. E. Demers, 418 Claremont Ave., Montreal, warehouse, to Cecil Carpenter & Co. Ltd., 5139 Blvd. Decarie Montreal. Est. **$90,000.** CD 1/2/48—ENR 1/8/48

Que., Riviere du Loup—PLANT Maple Leaf Peat Co. Ltd., c/o Levesque & Lagueuesse, 132 St. James St., Montreal, plant, day labor, **$100,000.** J. E. Irvine, c/o owner, engr.

UNCLASSIFIED

BIDS ASKED

March 2

Ga., Atlanta — BATHHOUSES — Fulton Co., Atlanta, Fairburn and Roswell Bath houses. John J. Harte Co., 284 Techwood Dr. N.W., engr.

March 10

Missouri—RURAL DISTRIBUTION LINES—Crawford Electric Co-operative, S. H. Hicks, pres., Bourbon, 240.66 mi. rural distr. lines, Crawford, Franklin, Washington, Gasconade and Dade Counties. Proj. Missouri 54H Crawford. Plans deposited. Breselbaum & Smith, 5968 Cote Brilliante Ave., St. Louis, Zone 12, engrs. CD 11/10—ENR 11/18.

LOW BIDDERS

+Ala., Tuskegee — ELECTRICAL UNDERGROUND SERVICES—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., 23, D. C., Feb. 15, rehabilitation electrical underground services for Veterans Administration Hospital, from Brooks-Allison Co. Trust Co. of Georgia Bldg., Atlanta, Ga., **$83,100.** CD 12/8—ENR 12/16.

Calif., Los Angeles — TRANSIT SHED FACILITIES — City Harbor Comm., 102 City Hall, rejected bids Jan. 19, transit shed facilities at Berths 7 and 153, Spec. 1119, L.B. **$949,160.** CD 2/1—ENR 2/10, under LB.

Ind., Fort Wayne — SWIMMING POOL, etc.—Bd. Park Comrs., City Hall, Feb. 10, general contract swimming pool and bath house, McMillen Park, from C. & C. Constr. Co., 2001 Post St., **$53,935.** Ackley, Bradley & Day, Swickley, Pa., archts. CD 1/21—ENR 2/3.

La., Camp Claiborne — REMOVING GAS PIPE—State Dir. Admin., 201 Capitol Annex, Baton Rouge, Jan. 31, removing gas pipe, Louisiana Ordnance Plant, from J. E. Tyler, Leesansport, **$49,976.**

Mich., Detroit—FREIGHT FACILITY REARRANGEMENT—State of Michigan, Lansing, rearrangement Chesapeake & Ohio R.R. freight facilities, in connection with John C. Lodge Expressway, from Bryant to Detwiler. 2304 Penobscot Bldg., Detroit, **$908,794.**

New York—CONTACT RAIL—Bd. Transportation, 250 Hudson St., New York, Zone 13, installing tracks, contact rail, incidental work, incl. furnishing, for Route 104, Sect. 12, Contr. P-73, Queens Co., from Tully & D'Napoli, Inc., 89-21-161 St., Jamaica, **$467,777.** CD 1/25—ENR 2/3.

Okla., Norman — STADIUM — University of Oklahoma, Norman, stadium addn., from Harmon Constr. Co., 1148 N.W. 4, Oklahoma City, **$975,000.** Wright & Selby, Hightower Bldg., Oklahoma City, archts.

Pa., Phila. — TRACK RELOCATION — Dept. P. Wks., City Hall Annex, Feb. 7, railroad track relocation, 60 St., from Robert Hawthorne, 1701 N. 2 St., **$201,363.** CD 1/31—ENR 2/3.

CONTRACTS AWARDED

Calif., Los Angeles—EXPOSITION BLDG.—State Div. Architecture P. Wks. Bldg., Sacramento, state exposition bldg. alterations, addns., for 9th District Agricultural Assn., to Jack Ellison, 4444 D. 57 Ave., Maywood **$98,300.** Anson Boyd, state archt.

Calif., San Francisco — CARHOUSE — Pub. Utilities Comn., City Hall, Potrero Carhouse alterations, Spec. 320, to William Horstmeyer Co., 22 Mars St., **$527,449.** Bids 1/24. CD 2/1—ENR 2/10.

Ill., Harrisburg — DRIVE-IN THEATRE — Olen J. Ingram, Fred W. Wilmath & J. D. Harter, Harrisburg, drive-in theatre, south of here, separate contracts. Approx. **$100,000.**

La., Homer — MOTOR COURT — Claiborne Hotel Courts, c/o contractor, motor court, to W. A. Gray Constr. Co., 801 Grimmet Dr., Shreveport. Est. over **$75,000.**

Miss., Jackson — STADIUM — Hinds Co., Jackson, Part 4 Veterans War Memorial Stadium, to M. T. Reed Constr. Co., Jackson, **$214,745.** Bids 2/8. CD 1/13—ENR 1/27.

Missouri—SITE DEVELOPMENT—Northeast Missouri Electric Power Co-operative, Paimyra, site development for power plant, Schedule 2, dredged fill, incl. plant site embankment from dredging, railroad siding and future full material from dredging, to Wapello Constr. Co., Quincy, Ill., **$91,317.** Bids 2/9. CD 1/25—ENR 2/3.

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Mo., St. Louis — WATER COOLING TOWER — Merchants Refrigeration Co., 1302 Lewis St., Zone 6, 28x32 ft. red wood water cooling tower, 1304 Clark Ave., to Water Cooling Equipment Co., New Hampshire and Weber Rds., Zone 23.

Mo., St. Louis—SILO—Mississippi Glass Co., ss Angelica St., Zone 7, concrete silo, 38 ft. diam., pile fdn., 95 W. Angelica St., to Fruin-Colnon Contg. Co., 1706 Olive St., Zone 3, Jones-Hettlesater Co., 911 Baltimore Ave., Kansas City, Mo., engr.

Mo., St. Louis — RECREATION CENTER — St. Mary Magdalen Catholic Parish, Rev. W. F. Mullally, pastor, 4924 Bancroft Ave., Zone 9, 1 story, bsmt., 196x140 ft., rein.-con. steel, brick, masonry recreation center, Sutherland Ave., 300 ft. east of Kingshighway Blvd., to Kloster Co., 4607 Beck Ave. Est. over **$300,000.** Bids 12/15. CD 12/8—ENR 12/16.

Mo., West Quincy—DRIVE-IN THEATRE—World Theatrical Enterprises, c/o H. Paul Stroud, World Theatre, 506 St. Charles St., St. Louis, Zone 1, drive-in theatre, to Pat McCarthy Drive-in Constr. & Equip. Co., Rural Route, Topeka, Kan. Est **$100,000.**

Neb., Omaha—PARK—City, City Hall, Dewy Park tennis center improvs., to Foster-Smetna Co., 4360 Nicholas St., **$82,331.** CD 11/27/46—ENR 12/12/46.

Okla., Okmulgee—SWIMMING POOLS, etc.—City, City Hall, 2 swimming pools and bathhouses with face brick constr. to F. D. Ford, Cordell, **$112,630.** est. $125,000. Awarded 2/9. C. E. Bretz, Commerce Exchange Bldg., Oklahoma City, engr. CD x-19—ENR 8/26.

Tennessee—RURAL DISTRIBUTION LINES—Volunteer Electric Co-operative, Decatur, 283 mi. rural distr. lines, Meigs Co., force account. Over **$300,000.** CD 3/22/48—ENR 4/15/48.

Tex., Alpine—PLAYGROUND, etc.—Palsano Baptist Encampment Assemble, c/o C. T. Mitchell, pres., Marfa, recreation, playgrounds, entertainment bldg., 85x45 ft. concrete auditorium, at Paisano Pass, owner builds. Approx. **$150,000.** CD 11/3—ENR 11/18.

+Washington — STEEL TOWERS — Bonneville Power Admin., 729 N.E. Oregon St., Portland, Ore., supplying towers for Olympia-Covington transmission line, Thurston Co., to Isackson Iron Wks., 2817 E. Marginal Way, Seattle, **$524,683.** Bids 1/23, awarded 2/8. CD 1/5—ENR 2/10, under LB.

+Washington — TRANSMISSION LINE — Bonneville Power Admin., 729 N.E. Oregon St., Portland, 18.42 mi. Steilacoom-Tacoma section of Foster Creek-Snohomish 230 kv. transmission line, King and Snohomish Counties, Inv. 4107, to Parker-Schram Co., Boulders Exchange Bldg., Portland, Ore., **$222,871.** Bids 12/15, awarded 2/8. CD 1/5—ENR 1/13, under LB.

+Washington — TRANSMISSION LINE — Bonneville Power Admin., 729 N.E. oregon St., Portland, Ore., 32.94 mi. Index-Snohomish Sect. Foster Creek-Snohomish 230 kv. transmission line, Snohomish Co., Inv. 4429, to Smith Bros., Vancouver, **$578,165.** Bids 1/4, awarded 2/8. CD 1/13—ENR 1/29, under LB.

+T. H., Oahu CEMETERY—U. S. Eng., P. O. Box 2240, Fort Armstrong, Honolulu, fourth increment of construction for National Memorial Cemetery of the Pacific, Punchbowl Crater, Inv. Eng-94-612-48-12, Item A and Alt. 1, to Nordic Constr. Co., P. O. Box 1241, Honolulu, **$133,985.** Bids 12/21. CD 1/5—ENR 1/13, under LB.

●Alberta — POWER LINES — Calgary Power Ltd., Calgary, 2,000 mi. farm power lines, Calgary. Owner builds. **$1,800,000.**

Alta., Calgary—GRAND STAND — Calgary Exhibition Bd., Victoria Park, 60x228 ft. grand stand, to Poole Constr. Co. Ltd., 2402 Second St. S.E. **$78,000.** Cowin & Co. Ltd., 1137 Pacific Ave., Winnipeg, Man., engr. CD 6/9/47—ENR 6/26/47.

Ont., Lesaide (Postal Dist. Toronto)—PARK IMPRVS.—Municipality, park imprvs., day labor, **$50,000.** D. E. Crawford, 211 Beaborough Dr., engr.

CONSTRUCTION REPORTS— Third Section

WATER SUPPLY

BIDS ASKED

About March 1

Neb., Benkelman—City, WW improvs. $80,000. Douglas McKnight, 344 S. Cotner Blvd., Lincoln, engr.

March 2

Pa., Norristown—Dpt. Property & Supplies, 18 and Herr Sts., Harrisburg, mechanical and piping constr. for water supply sys. addns. at Norristown State Hospital, $4000,000. Plans deposit $5. Stewart A. Jellett & Co., 1200 Locust St., Phila., engr. CD 2/14—ENR 2 17, under LB

March 7

Ala., Wetumpka—City, exten. sanitary sewers. O'Toole Eng. Co., Watts Bldg., Birmingham, engr.

March 16

S. C., Greenwood—Constr. P. Wks., Greenwood, 23,000 ft. 20-in. & 4-in. raw water supply line. Plans deposit $10. Wiedeman & Singleton, C'&S. Natl. Bank Bldg., Atlanta, Ga., engrs. CD 5 5—ENR 5/27.

LOW BIDDERS

Ga., Buchanan—City, Feb. 14, WW improvs., from Schley Goddy, 1519 Hilton Ave., Columbus, **$17,606.** CD 2 7.

Ga., Ringgold—Town, exten. watermains and certain sanitary sewers, from M. G. Aldridge, Macon **$13,812.** CD 2 8—ENR 2 10.

†N. M., Gallup—U. S. Eng., P. O. Box 1538, Albuquerque, received no bids Feb. 1, addnl. water well, Wingate Ordnance Depot, Inv. Eng-29-005-49-39. Will re-advertise.

Tex., Lamesa—City, Feb. 10, WW sys. improvs.; 5 well houses, pump. concrete fdn., waterlines, from George Tucker Pipeline Constr. Co., Odessa, **$29,215.** H. N. Roberts, 1310 Avenue Q, Lubbock, engr.

SEWERS, WASTE DISPOSAL

BIDS ASKED

March 1

N. Y., New York—President Bronx Boro, Bronx County Bldg., 851 Grand Concourse, New York, Zone 51, sewer, appurtenances in Racciati Ave. between Ellsworth and Vincent Aves., Vincent Ave. between Layton and Fairmount Aves., between Fairmount, Vincent and Wilcox Aves.; E. 163 St. between Union and Prospect Aves.; E. 221 St. and Paulding Ave.

March 21

Mich., Lansing—City, City Hall, 6 digestion tanks, sewage disposal sys., Scott L. Seel, A.I.A. $600,000. Drury McNamee & Porter, Ann Arbor, archts. CD 12-17—ENR 1 7.

About April 14 or May 14

Tex., Waco—City, Dr. J. E. Hawkins, Mayor, City Hall, sanitary sewer lateral and main extens. and interceptor sewer enlargement, $200,000. Julian Montgomery, 602 West Ave., Austin, engr. John H. Stanse, city engr. CD 7/1—ENR 7 22.

LOW BIDDERS

La., Baton Rouge—Brookstown Homes, Inc., 2019 3 St., Feb. 14, sewer lines, disposal plant, Brookstown Homes subdivision, from M. T. Read Constr. Co., 162 Millsaps Blvd., Jackson, **$109,000.** CD 2 2.

Mo., Mount Vernon—City, c/o Eldred Somekey, mayor, City Hall, and State Tuberculosis Hospital, c/o Sam Marsh, dir. State Dpt. P. Health & Welfare, Jefferson City, received no bids Feb. 8, sanitary sewer improvs. to serve city and State Tuberculosis Hospital, $85,000. CD 12 20—ENR 12 30.

Pa., Embreeville—Dpt. Property & Supplies, 18 and Herr Sts., Harrisburg, Feb. 16, storm sewers at Embreeville State Hospital from George & Lynch, M. 708 Delaware Trust Bldg., Wilmington, Del. **$51,055.** CD 1 24—ENR 2 3.

Tex., Lubbock—City, W. H. Rogers, mayor, Feb. 10, sanitary sewer improvs. and lift station from Panhandle Constr. Co., 820 Texas St., **$118,373.** Est. $90,000. CD 1 24—ENR 2 3.

CONTRACTS AWARDED

Ont., Toronto—East York, Twp. W. H. Heaton, c/k., Toronto, installing sanitary and storm sewers and auxiliary works, to Yearley & Reed, Ltd., 301 Cedarvale Ave., Approx. **$50,000.** CD 2 4.

BRIDGES

BIDS ASKED

STATE HIGHWAY LETTINGS

March 1	**March 9**
Iowa	**California**
Maryland	**Louisiana**
Wisconsin	**New York**
March 2	**March 23**
Maine	**Louisiana**
March 4	**Late in March**
North Dakota	**Montana**
March 8	
Maryland	

LOW BIDDERS

Texas—State Hy. Comn., Austin, Feb. 16, Elm and Walker Creek Bridges, approaches, Hy. U.S. 77, Proj. F 191 4(3), Milam Co., from F. M. Reeves & Sons, P.O. Box 972, Austin, **$145,725.** CD 1 26—ENR 2 3.

CONTRACTS AWARDED

Kan., Peck—Chicago, Rock Island & Pacific R.R. Co., F. W. Thompson, eng. engr., LaSalle St. Station, Chicago, Ill., substructure, steel erection 20 ft. pated pile trestle, 8 deck plate girder spans, on concrete masonry, to Lost & Weatherly Constr. Co., 231 W. 47 St., Kansas City, Mo., **$89,000.**

STREETS AND ROADS

BIDS ASKED

STATE HIGHWAY LETTINGS

February 28	**March 9**
Pennsylvania	**California**
March 1	**Louisiana**
Iowa	**New Jersey**
Wisconsin	**New York**
March 2	**March 10**
Arizona	**California**
March 3	**Late in March**
Nebraska	**Montana**
March 4	
North Dakota	
Washington	

March 29

†New York—U. S. Eng., Engineer Park, Buffalo, Zone 7, constructing access road, Onondaga Dam, Serial No. Eng-30-023-49-46.

LOW BIDDERS

Texas—State Hy. Comn., Austin, Feb. 15, c. conc. 0.2913 mi. Hy. U.S. 75, C-32-1-4, Dallas Co., from Austing Bridge Co. & Austin Road Co., P.O. Box 1590, Dallas, **$334,519.** CD 1 26—ENR 2 3.

Texas—State Hy. Comn., Austin, Feb. 16, 6 rd. bdg., 8 structures, N. 198 mi., Marcus and Hogans Creek Bridges, Hy. U.S. 59, Proj. S-Panola and Rusk Counties, from R. C. Buckbee, Jacksonville, **$280,710*****bk. conc. 19.226 mi. Hy. U.S. 77, Proj. C 102-2-14 and C 102-3-9, Nueces Co., from J. M. Bellinger, Inc., P.O. Box 1558, Corpus Christi, **$87,369*****flexible base, single asph. 5.963 mi. Hy. FM 748 and 750, Proj. V. 350-3-1 and V. 163-10-1, Gray Co., from Ernest Loyd, P.O. Box 2129, Fort Worth, **$67,042*****flexible base, single asph. 6.056 mi. Hy. SH 19, Proj. S. 290-1-15, Rains Co., from Collins Constr. Co., P.O. Box 1192, Austin, **$131,321**; est. $132,000***flexible base, seal coat 9.078 mi. Hy. FM 134 and 451, Proj. S. 271-4(1) and S. 842-4(1), Harrison Co., from Long Bros., P.O. Box 1, Mc Kinney, **$88,492*****storm sewers, c. conc. 1.408 mi. Hy. U.S. 67 and S. Proj. FI 8-8-(3), Dallas Co., from L. H. Lacey Co., 5630 Yale Blvd., Dallas, **$267,361*****base and asph. 2.54 mi. U.S. Hy. 59, Proj. F. 251-4(8), Cont. 2, Bee Co., from Killam House Co., P.O. Box 1981, San Antonio, **$211,251****flexible base, single asph. c. conc. 3.656 mi. Hy. U.S. 69 and FM 841, Proj. F. 272-1(6), Angelina Co., from Russ Mitchell, Inc., Box 8056, Houston, **$117,624*****soil asphalt base, single asph. 7.142 mi. Hy. FM 628, FM 647, FM 216, Proj. S. 571-6(2), S. 572-4(3), Navarro and Freestone Counties, from Wallace & Rowden, 5513 E. Grand Ave., Dallas, **$98,195.** CD 1 26—ENR 2 3.

CONTRACTS AWARDED

Oklahoma—State Hy. Dpt., Oklahoma City, b. conc. 5.161 mi. State Hy. 7 east of Antlers, Pushmataha Co., to Price Rich & Co., 847 Cr. 140 NW 5 St., Oklahoma City, **$267,982**; est. $263,278. Bids 2 8, awarded 2 8.

EARTHWORK, WATERWAYS

March 16

†Washington—U. S. Eng., 4735 E. Marginal Way, Seattle, Zone 4, repairing Mudboat and Cutoff Sough Dikes on Whilapa River, at Raymond.

About March 21

†Kansas—U. S. Eng., 601 Davidson Bldg., Kansas City, Mo., earth levee, rein.-conc. floodwall, appurtenances, along left bank of Kansas River, Mile 0.5 to Mile 3.33 at Kansas City, Armourdale Dist., Kansas City Flood Control Proj., Serial No. Eng 27-625-49-159.

March 24

†Montana—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing del. f.o.b. cars shipping point or f.o.b. cars Louisville, three 13 ft. 8 in. welded plate steel penstocks, incl. bends, expansion joints, piezometer connections, drain and filling line connections, service and fire protection water connections, manhole rings, dished heads, test plates, appurtenances, one 13 ft. welded plate steel pumping intake, incl. dished head, earth welding neck reducing flange and wedge gate valves, filling line connection, rings, test plates, appurtenances, 4 welded plate steel outlet conduit liners, incl. flanges, manholes, rings, test plate and appurtenances, Canyon Ferry Dam, Canyon Ferry Unit, Missouri Basin Proj., Spec. 2777. CD 3-25-49—ENR 3 17/49.

LOW BIDDERS

†Georgia and South Carolina—U. S. Eng., Post office Bldg., Savannah, Ga., rejected bids Jan. 20, clearing reservoir, Group 1-A, Clark Hill Proj., St. Augusta, Ga., on both sides Savannah River, Inv. No. Eng-09-122-49-48, Item 1, Lt. **$125,575** and Item 2, Lt. **$319,000.** CD 1 27—ENR 2 3, under LB.

N. J., Brant Beach—Dpt. Conservation, Trenton, Feb. 14, jetty from Jesse A. Howland & Sons, Inc., 58 Church St., Sea Bright, **$66,729.**

†North Carolina—U. S. Eng., 308 Customhouse, Wilmington Harbor, Anchorage Basin and Swash Channel, Cape Fear River, Inv. Eng-31-025-49-71, from Norfolk Dredging Co., Smithfield Wharf, Norfolk, Va., **$51,129.** Bids 2/2. CD 1 26.

†Washington—U. S. Eng., 4735 E. Marginal Way, Seattle, Zone 4, rejected bids Feb. 15, dredging Bay Center Channel, Willapa Harbor, Lt. **$19,920.** Will re-advertise. CD 2 3.

CONTRACTS AWARDED

●†Florida—U. S. Eng., P.O. Box 1169, Mobile, Zone 7, three 111,111 kva alternating current generators, appurtenances, for Jim Woodruff Dam, Apalachicola River, Inv. Eng-01-026-49-74, to Westinghouse Electric Co., 1407 Comer Bldg., Birmingham, Ala., **$1,468,870.** Bids 12 21. CD 11 28—ENR 12 2.

●Fla., Ft. Lauderdale—Universal Constr. Co., 2121 S. Andrews Ave., seawalls, docks, cut walks paving in new Yachts Basin, force account, **$1,460,500.**

†North Dakota—U. S. Eng., Fort Lincoln, P.O. Box 300, Bismarck, concrete aggregates for Garrison Dam and Reservoir Proj., Inv. Eng-32-042-49-76, Schedule A to L, G. Everist, Inc., 502 Paulson Bldg., Sioux Falls, S.D., **$121,940.** CD 1/28—ENR 2 3.

AIRPORTS AND AIRBASES

LOW BIDDERS

†Va., Norfolk—BULKHEAD—Pub. Wks. office, Fifth Naval Dist., U. S. Naval Base, Zone 11, repairing East End Bulkhead Chambers Field, Naval Air station, NOY 17419, Spec. 21278, from P. J. Gannaway, 7460 North Shore Rd., **$138,550.** CD 2 2.

PUBLIC BUILDINGS

BIDS ASKED

March

†Md., Bethesda—P. Bldgs. Admin., W. E. Reynolds, constr. C. St. and Independence Ave., S. W., Wash., D. C., 2 story, 56x96 ft., L-shaped, concrete, brick bldg. containing filling station, motor vehicle storage of the Clinical Center, National Institutes of Health, Federal Security Agency, **FWA.**

March 2

†Louisiana—U. S. Eng., foot of Peyrania St., New Orleans, Zone 8, repairing residences, Keystone and Vermilion Locks, Serial No. Eng. 16-047-49-270.

March 4

†Fla., Jacksonville—U. S. Eng., P. O. Box 4970, repairing altering Warehouse II, U. S. Engineers Dredge Depot Reservation, Serial Inv. No. Eng-08-122-49-69.

Va., Alexandria—Architect T. C. Williams, supt. Schools, 208 N. Columbus St., Charles Barrett School, $170,000. Dixon & Norman, 1202 E. Main St., Richmond, archts.

March 7

Miss., Woodville—Woodville Consolidated School Dist., consolidated school, $225,000. Extended date: N. W. Overstreet & Assoc., 201 N. Lamar St., Jackson, archts. CD 11 25—ENR 12 2

March 8

Calif., Willows—State Dpt. Architecture, P. Wks. Bldg., Sacramento, 1 story, rein.-conc. type Armory bldg. Plans deposit $25. Anderson Boyd, P. Wks. Bldg., Sacramento, state archt.

Proposal Advertisements see pp. 56 to 58

U. S. Government

U. S. DEPARTMENT OF COMMERCE, CIVIL AERONAUTICS ADMINISTRATION, Box 440, Anchorage, Alaska. Bids will be received under Invitation No. 849-842 until 2:00 p.m., March 15, 1949, for the construction of an airport near Fairbanks, Alaska. The work in general consists of the following:

371 ac. Clearing and/or grubbing, light willow birch and alder
8,318 lin. ft. Corr. metal pipe in place, size ranging from 48" to 12"
2,238,000 cu. yd. Unclassified excavation
250,370 sq. yd. Gravel base course ranging from 6" to 15" in depth
81,750 gal. Bituminous prime coat
52,555 gal. RC-2 bituminous seal coat
38,928 ton Hot mix 3" bituminous surface
95 ac. Seeding and fertilizing
40,275 lin. ft. Underground power cable in place for field lighting, together with related lights and conduit

Other miscellaneous items such as paint striping of runways, concrete drainage structures, relocation of power and telephone lines, etc.

Plans, specifications and bid forms are available from this office. A deposit of $25.00 per set by certified check or money order payable to Treasurer of U. S. is required on each set of plans furnished.

(850)

UNITED STATES DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specification No. 2575) will be received by Bureau of Reclamation, Denver, Colorado, until 2 p.m., March 31, 1949, and then publicly opened for furnishing unit control boards, main control board, and load- and frequency-control equipment for units R-7, R-8, and R-9, Grand Coulee Right Power Plant, Columbia Basin Project, Washington. Delivery is desired within 450 days. For particulars, address the Bureau of Reclamation, Building 1-A, Denver Federal Center, Denver, Colorado.

MICHAEL W. STRAUS, Commissioner

(879)

CORPS OF ENGINEERS, U. S. ARMY, New England Division, Army Base, Boston 10, Mass.—Inv. No. W-19-016-49-69—Sealed bids will be received at this office until 2 o'clock p.m., on the 8th day of March 1949, and then publicly opened, for construction of Boiler House, Garage, and Personnel Quarters Buildings, Veterans Administration Hospital, Manchester, N. H., in accordance with specifications and plans, copies of which are available at this office. Deposit of $25.00 per set, in form of certified check or postal money order payable to "Treasurer of the United States" required.

(876)

Public Roads Administration, Federal Works Agency, February 11, 1949. SEALED BIDS will be received at the office of the Division Engineer, Public Roads Administration, 1440 Columbia Pike, Arlington, Virginia, until 10:00 a.m., E.S.T., March 15, 1949, for the construction of Project 188-T10-F2-V4, Blue Ridge Parkway, Floyd, Patrick and Carroll Counties, Virginia, Length 3.266 Miles. The approximate quantities of the more important items are 101,000 Gal. Cut-back Asphalt and 41,700 Tons Type H-1 Asphalt Pavement, Liquefier Type. Minimum wage rates have been fixed as required by law. For plans and specifications, a deposit of $10.00 cash or certified check made payable to the Treasurer of the United States, will be required to insure their return within 15 days after the opening of bids. Plans, Specifications and Proposal Forms may be obtained at the address given above, or at Public Roads Administration, 416 State and City Office Building, Roanoke, Virginia. H. J. Spellman, Division Engineer.

(875)

OFFICIAL PROPOSALS

Bids: March 30, 1949 (873)

Construction of Distilling Basin and Electric Lighting System

NOTICE TO BIDDERS

Bid Date March 30, 1949

The Commonwealth of Pennsylvania will receive sealed proposals through the Water and Power Resources Board, Department of Forests and Waters, Room 404, Education Building, State Capitol, Harrisburg, Pennsylvania, until 1:30 P.M., Eastern Standard Time, Wednesday, March 30, 1949, which will be publicly opened and read at that time for:

Contract No. 35. For Construction of Auburn Desilting Basin No. 1 Right, on the Schuylkill River between Auburn and Landingville, Pennsylvania.

Contract No. 35-E. For Construction of Electric Lighting System for Auburn Desilting Basin No. 1 Right, on the Schuylkill River between Auburn and Landingville, Pennsylvania.

Plans, Specifications, General Conditions and Proposal forms may be examined free of charge or complete sets not exceeding three (3) may be secured by prospective bidders by applying to Schuylkill River Project Engineers, 20 S. Fifteenth Street, Philadelphia, Pennsylvania, upon making a deposit in the amount stated below. This deposit will be refunded only upon the return of the plans and specifications in good order within ten (10) days after the opening of bids.

Each proposal must be accompanied by a proposal guarantee in the form of a certified check, bank cashier's or bank treasurer's check drawn to the order of the Commonwealth of Pennsylvania in the amount stated below.

Contract	Proposal For	Cost One Set Plans & Specs.	Proposal Guaranty
35	Auburn Desilting Basin No. 1 Right	$25.00	$125,000.00
35-E	Electric Lighting System for Auburn Desilting Basin No. 1 Right	$5.00	$100.00

A Joint Venture bid will not be considered and all proposals must be completely filled out, signed, executed and sealed in special bid envelope.

Attention is called that Article No. 10 of the Business Corporation Law approved May 5, 1933, P. L. 364 requires a foreign corporation, before doing business in this Commonwealth, to procure a Certificate of Authority to do business in Pennsylvania, from the Pennsylvania Department of State.

The Commonwealth of Pennsylvania reserves the right to reject any or all bids.

COMMONWEALTH OF PENNSYLVANIA
Department of Forests and Waters
M. F. DRAEMEL, Secretary

Bids: March 29, 1949 (877)

Dredging and Appurtenant Work

NOTICE TO BIDDERS

Bid Date March 29, 1949

The Commonwealth of Pennsylvania will receive sealed proposals through the Water and Power Resources Board, Department of Forests and Waters, Room 404, Education Building, State Capitol, Harrisburg, Pennsylvania, until 1:30 P.M. o'clock Eastern Standard Time, Tuesday, March 29, 1949, which will be publicly opened and read at that time for:

Contract No. 24. For Dredging, Floodway Clearing and Excavation in River Section II of the Schuylkill River Pennsylvania.

Contract No. 25. For Dredging, Floodway Clearing and Excavation in River Section IV of the Schuylkill River in Pennsylvania.

Plans, Specifications, General Conditions and Proposal forms may be examined free of charge or complete sets not exceeding three (3) copies may be secured by prospective bidders by applying to Schuylkill River Projects Engineers, 20 S. Fifteenth Street, Philadelphia, Pennsylvania upon making a deposit of fifty dollars ($50.00) per set. *This deposit will be refunded only upon the return of the plans and specifications in good order within ten (10) days after the opening of bids.*

Each proposal must be accompanied by a proposal guarantee in the form of a certified check, bank cashier's or bank treasurer's check drawn to the order of the Commonwealth of Pennsylvania in the amount stated below.

Contract	Proposal For	Cost One Set Plans & Specs.	Proposal Guaranty
24	Dredging, Floodway Clearing & Excavation in River Section II	$50.00	$125,000.00
25	Dredging, Floodway Clearing & Excavation in River Section IV	$50.00	$125,000.00

A Joint Venture bid will not be considered and all proposals must be completely filled out, signed, executed and sealed in special bid envelope.

OFFICIAL PROPOSALS

Attention is called that Article No. 10 of the Business Corporation Law approved May 5, 1933, P. L. 364 requires a foreign corporation, before doing business in this Commonwealth, to procure a Certificate of Authority to do business in Pennsylvania, from the Pennsylvania Department of state.

The Commonwealth of Pennsylvania reserves the right to reject any or all bids.

COMMONWEALTH OF PENNSYLVANIA
Department of Forests and Waters
M. F. DRAEMEL, Secretary

Bids: April 27, 1949 (888)

Laying Cast Iron Pipe Distribution Mains and Appurtenant Work

CLARKSBURG WATER BOARD
CLARKSBURG, WEST VIRGINIA

Sealed proposals will be received for the item listed below by the Clarksburg Water Board at their office in Clarksburg, West Virginia until 10:00 A.M. on the 27th day of April, 1949, up to the hour of opening bids, at which time and place all bids will be publicly opened and read aloud. Bids will be received on the contract covering:

Laying Cast Iron Pipe Distribution Mains

The successful bidder will be required to furnish a satisfactory performance bond in the amount of 100% of his contract. The contract documents, including specifications and drawings are on file at the office of the Clarksburg Water Board, Clarksburg, West Virginia and at the office of Alvord, Burdick & Howson, 1401 Civic Opera Bldg., Chicago, Illinois.

The right is reserved by the Water Board to reject any or all bids or to accept any considered advantage to the Water Board.

Certified check, cash, government bonds, bidder's bond, or bank draft payable to the Clarksburg Water Board, or a satisfactory bid bond executed by the bidder and a surety company in an amount equal to 10% of the bid, shall accompany the proposal.

No bid may be withdrawn after the scheduled closing time for the receipt of bids but bids may be withdrawn at any time prior to the scheduled time for opening bids.

SCOTLAND G. HIGHLAND
Secretary and General Manager
Clarksburg Water Board.
Clarksburg, West Virginia.
....., 1949.

Bids: March 3, 1949 (874)

Flood Control and Recreational Dam

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OR FORESTS AND WATERS

The Commonwealth of Pennsylvania will receive sealed proposals through the Secretary of Forests and Waters, at his office, Room 405, Education Building, Harrisburg, Pennsylvania, until 1:00 o'clock E.S.T. March 3rd, 1949 which will be publicly opened and read at that time for the following project.

For the construction of a Flood Control and Recreational Dam on Shawnee Branch of Raystown Branch Juniata River, Bedford County, Pennsylvania.

Plans, specifications and proposal forms not exceeding two (2) complete sets, may be secured by prospective bidders upon application to the Department of Forests and Waters, Room 163, Education Building, Harrisburg, Pennsylvania, upon payment of Twenty-five ($25.00) Dollars per set, which will not be refunded.

Plans and specifications may be reviewed free of charge at the office of the Department located at Harrisburg, or at the office of The Chester Engineers, 210 East Parkway at Sandusky Street, Pittsburgh, Pennsylvania.

Each proposal must be accompanied by a certified check, drawn to the order of the Commonwealth of Pennsylvania, in the amount of Five (5%) percent of the total amount of bid.

The right is reserved to reject any and all bids.

M. F. Draemel
Secretary of Forests and Waters

OFFICIAL PROPOSALS
(Continued from page 56)

Bids: March 9, 1949 (870)

State Road Work

NOTICE TO CONTRACTORS: STATE DEPARTMENT OF PUBLIC WORKS, ALBANY N. Y.—Pursuant to the provisions of Chapter 63 Laws of 1936, as amended, and special provisions for projects financed with federal aid funds, sealed proposals will be received until ten-thirty o'clock A. M., eastern standard time *WEDNESDAY, MARCH 9, 1949* by Henry A. Cohen, Director, Bureau of Contracts & Accounts, *11th* Floor, The Governor Alfred E. Smith State Office Building, Albany, N. Y., for the following projects: Maps, plans, specifications and proposal forms may be seen and obtained at the office of the State Department of Public Works, Bureau of Contracts & Accounts, Albany, N. Y., and at the office of the District Engineers noted below, and may also be seen at the office of the State Department of Public Works, 270 Broadway, New York City.

The deposit for plans and proposal forms for each contract containing 1 to 15 sheets is $5.00; 16 to 30 sheets, $10.00; over 30 sheets, $20.00. A refund will be made in full to bidders for the return of one set in good condition within 30 days of award or rejection of bids; refund for all other sets in good condition, similar period, will be 50% of deposit.

County	Contract No.	Name	Miles	Type	Deposit	Estimated Cost of Work
		DISTRICT No. 1				
		G. L. NICKERSON, Dist. Engr., 353 Broadway, Albany, N. Y.				
Greene	FARC 49-25 CTRC 49-23	Palenville-Catskill, S. H. 8231 Catskill Thruway (Ulster Co. Line Brick School House Rd., C1 46-2 Brick School House Rd. to S. H. 8231, C146-3)	6.31	Asph. Conc. Opt. = 0.43 Mi. Conc. 9" Thk. = 5.88 Mi.	$86,000 Plans $10,000	$1,448,000
	RC 49-24	Saugerties-Catskill, Pt. 3, S.H. 5027 Project No. F387(2)				
		DISTRICT No. 2				
		L. Ketchum, Dist. Engr., 109 No. Genesee St., Utica, N. Y.				
Montgomery	FeRC 49-27	Fort Plain Village-Hancock, St. Pt. 2, S. H. 927 Fort Plain-Canajoharie, S. H. 8384 Fort Plain Village-Hancock St., S. H. 1866 Project No. FG467(4)	0.38	Double Track Girder, 104' Span Conc. 9" Thk., 24' Wdt.	$23,000 Plans $5.00	$393,000
Oneida	FARC 49-14	Waterville-New Hartford, Pt. 2, S. H. 8298 Utica-Oneida Castle, Pt. 1, S. H. 250 New Hartford Village, S. H. 5052 Project Nos. F436(3) & F333 (17)	2.19	Asph. Conc. Opt. = 0.59 Mi. Conc. 8" Thk., 22' Wdt. = 1.59	$33,000 Plans $10.00	$561,000
		DISTRICT No. 8				
		J. S. BUSBY, Dist. Engr., Pleasant Valley Rd., Poughkeepsie, N. Y.				
Dutchess	FARC 49-1	South, S. H. 223 Project No. F394(10)	1.49	Asph. Conc. Opt.	$25,000 Plans $5.00	$465,000
Orange	FASS 49-11	Finchville-Smith Cors., Co. Rd. 35 Project No. S265(1)	3.13	Bit. Mac. Opt. (Road Mix)	$12,000 Plans $5.00	$206,000
Ulster & Sullivan	SH 49-4 SH 49-6 SH 49-7	Woodbourne-Ellenville, Pts. 1, 2A, 2B	10.94	Alpha 350.14 I-Beam 3 Spans, Tot. 197' (Alpha) I-Beam (Alpha) Conc. Slab, Tot. 91' Grad-Gravel Surf.	$75,000 Plans $20.00	$1,346,000
		DISTRICT No. 10				
		J. J. DARCY, Dist. Engr., Montauk Hwy. at Little E. Neck Rd., Babylon, L. I., N. Y.				
Bronx	FACBE 49-1	Cross Bronx Expressway (Cont. 10E) Project No. U-1084(4)	0.62	Rigid Fr. 2 @ 58' 35' Girder 84' Girder Fed. Overpass 2 @ 49.5' 3 Spans 214.9' Conc. 9" Thk. 2 @ 36'	$250,000 Plans $20.00	$4,281,000
Bronx	FAMDE 49-1	Major Deegan Expressway Cont. 1A) Project No. U-1082(2)	0.72	Repaving & Drainage Demolition, Fdt., Drainage	$120,000 Plans $20.00	$2,116,000

Proposal for each contract must be submitted in a separate sealed envelope with the name and number of the contract plainly endorsed on the outside of the envelope. Each proposal must be accompanied by cash, draft or certified check payable to the order of "State of New York, Commissioner of Taxation & Finance" for the sum as specified in the advertisement and the proposal. The retention and disposal of the bidding check, the execution of the contract and bonds shall conform to the provisions of the Highway Law, as set forth in "Instructions to Bidders."

When optional types are permitted on contracts with federal funds, bidders must state in the space provided in the proposal the exact designation of the optional type upon which the proposal is predicated.

The right is reserved to reject any or all bids.

H. D. TALLAMY
SUPT. OF PUBLIC WORKS

U. S. Government

UNITED STATES DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specifications No. 2559) will be received by Bureau of Reclamation, Cody, Wyoming, until 10 a.m., March 11, 1949, and then publicly opened for furnishing labor and materials and performing all work for the construction of earthwork, canal lining, and concrete siphon, Willwood Canal relocation, vicinity of Ralston, Wyoming. Principal items are approximately: 52,500 cu. yds. of excavation; 5400 cu. yds. of concrete; furnishing and handling 815 bbl. of cement; furnishing and placing 78,200 lb. of reinforcement bars; and other work. Time allowed for completion will be 240 days. For particulars, address the Bureau of Reclamation, Cody, Wyoming; or Building I-A, Denver Federal Center, Denver, Colorado.

MICHAEL W. STRAUS, Commissioner.
(867)

UNITED STATES DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specifications No. 2571) will be received by Bureau of Reclamation, Denver, Colorado, until 2 p.m., March 17, 1949, and then publicly opened for furnishing two oil pressure actuator-type governors for 115,000 hp hydraulic turbines for Boulder Canyon Project, Arizona-California-Nevada. Delivery is desired within 710 days. For particulars, address Bureau of Reclamation, Building I-A, Denver Federal Center, Denver, Colorado.

MICHAEL W. STRAUS, Commissioner.
(868)

OFFICIAL PROPOSALS

Bids: March 15, 1949 (869)

Water Waste Survey

CITY OF BETHLEHEM

NOTICE TO BIDDERS

Sealed Proposals for "WATER WASTE SURVEY" of the Water Works System of the City of Bethlehem, Pennsylvania, addressed to the City Clerk and marked "Proposals for Water Waste Survey" will be received until 11:00 A.M. E.S.T. on the 15th day of March, 1949 in compliance with specifications on file in the office of the City Engineer and the office of the Director of Parks and Public Property.

The city reserves the right to reject any or all proposals.

Bertram L. Nagle
City Clerk

OFFICIAL PROPOSALS

Bids: March 9, 1949 (871)

State Road Work

STATE OF NEW JERSEY
STATE HIGHWAY DEPARTMENT
TRENTON

READVERTISEMENT

NOTICE IS HEREBY GIVEN that sealed bids will be received by the State Highway Commissioner for:

FEDERAL STREET

Construction of Federal Street, from Haddon Avenue to Cooper River, in the City of Camden, Camden County, Federal Aid Secondary Project No. S-80(2). Length 0.70 mile.

Estimated:

5,401 cu. yds. Excavation—Unclassified
17,145 sq. yds. 9" Rein. Conc. Pavement
7,457 lin. ft. Concrete Curb
35,620 sq. ft. Concrete Sidewalk
681 tons FA-BC-1
36 units Catch Basins and Manholes
3,545 lin. ft. Rein. Concrete Pipe

Bids for the above will be received at the office of the State Highway Department, Room 102, State House Annex, Trenton, N. J., on Wednesday, March 9, 1949, at eleven o'clock (11:00 A. M.—EASTERN STANDARD TIME), and will be opened and read immediately thereafter.

The receipt and opening of bids is subject to the proper qualification of the bidder in accordance with the provisions of the prequalification law and the regulations adopted by the State Highway Commissioner. Bidders must also submit a revised financial statement and statement of plant and equipment with their bid.

NOTE: The proposed project is a "Federal Aid Secondary Project" authorized by the provisions of Title 23 of the Revised Statutes of New Jersey and supplements, and by Sections 2, 3 and 4, P. L. 521, 78th Congress, and is to be performed in accordance with the special provisions and requirements of the Federal Works Agency, Public Roads Administration, as outlined in the specifications, which provisions require that labor be employed from lists furnished by the State Employment Service, 538 Broadway, Camden, New Jersey. The attention of bidders is directed to the special provisions covering subletting or assigning the contract. The minimum wage paid to all unskilled labor employed on this contract shall be 65c per hour. The minimum wage paid to all intermediate grade of labor employed on this contract shall be 75c per hour. The minimum wage paid to all skilled labor employed on this contract shall be $1.25 per hour.

Drawings, specifications and form of bid, contract and bond for the proposed work are on file in the office of the State Highway Department, Trenton, N. J., and may be inspected by prospective bidders during office hours. Plans will be furnished on a deposit of Ten Dollars ($10.00) for each set of plans upon application to A. Lee Grover, Chief Clerk, State Highway Department, Room 102, State House Annex, Trenton, N. J. Bids must be made upon the standard proposal forms in the manner designated in the standard State Highway specifications, and must be enclosed in sealed special addressed envelopes bearing the name and address of the bidder and work bid upon on the outside, and must be accompanied by a certified check drawn to the order of the Treasurer of the State of New Jersey for not less than ten percent (10%) of the amount of the bid, provided that the said certified check shall not be less than $500.00 nor more than $20,000.00 and must be delivered at the above place on or before the hour named. Copies of the standard proposal forms and special addressed envelopes will be furnished on application. Bids not enclosed in sealed addressed envelopes will be considered informal and will not be opened. The right is reserved to reject any or all bids.

Signed: Spencer Miller, Jr.
State Highway Commissioner

U. S. Government

Office of the District Engineer, Corps of Engineers, U. S. Army, 1217 U. S. Post Office and Custom House, St. Paul 1, Minnesota. Sealed bids, in duplicate, for furnishing all labor and materials and performing all work required for construction of a Small Boat Harbor and Channel Improvement at St. Paul, Minnesota, will be received in this office until 11:00 A. M., C. S. T., 16 March 1949, and then publicly opened. Further information upon application.

(872)

(Continued on page 58)

OFFICIAL PROPOSALS

(Continued from page 57)

Bids: March 15, 1949 (866)

Roadway and Sidewalk Improvements

Invitation No. 49-10 February 8, 1949
Subject: NOTICE OF ADVERTISEMENT FOR BIDS FOR GROUP I ROADWAY AND SIDEWALK IMPROVEMENTS FOR CITY ROADS AND LANES AND CONCRETE ENTRANCE SIDEWALKS AND STEPS TO DWELLING UNITS AT OAK RIDGE, TENNESSEE

To: Prospective Bidders and Others Concerned:

1. On February 11, 1949, Roane-Anderson Company, as Agent for and on behalf of the United States of America under Contract No. W-7401-eng-115, will issue invitations for bids for Group I Roadway and Sidewalk Improvements for City Roads and Lanes and Concrete Entrance Sidewalks and Steps to Dwelling Units, at Oak Ridge, Tennessee.
2. The work consists of furnishing all labor, tools, equipment, materials (except those furnished by the Agent) and performing all work for the improvement of approximately five and eight tenths (5.8) miles of city roads and lanes, including earthwork, drainage structures, concrete combined curb and gutter, hot asphaltic concrete base for pavement widening and leveling or wedge course, stabilized aggregate base course for widening certain streets for parking, hot asphaltic concrete surfacing, hot asphaltic concrete sidewalk along one side of roads and lanes; construction of cement concrete entrance walks and steps to approximately six hundred and eighty-five (685) dwelling units; top soil and seeding of newly graded areas and or areas disturbed during construction; and appurtenant and related work together with such incidental work at the sites as may be required.
   Approximate quantities for major items are listed:
   76,100 Square yards top soil and seeding
   61,487 Lineal feet combined curb and gutter
   159,400 Square feet of concrete entrance sidewalks including steps
   344,400 Gallons of Petroleum asphalt for hot asphaltic concrete including tack material
   23,100 Tons of asphaltic concrete for roadway surfacing and asphaltic sidewalks
   184 New catch basins
   10,000 Lineal feet of reinforced concrete pipe culverts
3. All bids will be considered not only on the basis of the lowest bid but on the applicable experience, financial assets, integrity of the bidder and his ability to obtain equipment and employees. The Roane-Anderson Company, as Agent aforesaid, reserves the right to reject any and all bids and to waive any informality in bids received, and to accept or reject any item of any bid, unless such bid is qualified by specific limitation. However, all accepted items will be awarded as a whole to one bidder.
4. Bids will be received until 2:00 P.M. (EST) March 15, 1949 and then publicly opened. Two-hundred and seventy (270) calendar days will be allowed for the completion of the work.
5. Request for plans and specifications should be made to Roane-Anderson Co., Attention: F. C. Feld, Assistant Chief Purchasing Agent, Purchasing Dept., P. O. Box 456, Oak Ridge, Tennessee, and should be accompanied by a Postal Money Order or a certified check payable to the order of Roane-Anderson Co., in the sum of $50.00 which deposit will be refunded after the plans and specifications have been returned in good condition.
6. For additional information address the above mentioned, or telephone F. C. Feld, through Knoxville, 2-7132, extension 4850, or Oak Ridge 5861, extension 4850.

ROANE-ANDERSON COMPANY,
AS AGENT FOR AND ON BEHALF OF THE UNITED STATES OF AMERICA.

OFFICIAL PROPOSALS

Bids: March 4, 1949 (865)

Municipal Lighting Plant

SWITCH BAY ADDITION
TO
WEST WATER STREET POWER PLANT
TAUNTON MUNICIPAL LIGHTING
PLANT, TAUNTON, MASSACHUSETTS

Sealed bids for constructing "The Pile Foundations" for an addition approximately 30 ft. by 90 ft. by 35 ft. high on the West Water Street Power Plant for a new switch bay and office facilities will be received by the Manager at his office in the Taunton Municipal Lighting Plant Building until 11:00 A. M. Eastern Standard Time, Friday, March 4, 1949. The Contract Documents, including Specifications and Drawings, may be examined at the office of the Taunton Municipal Lighting Plant, Taunton, Massachusetts, on and after February 9, 1949, every weekday except Saturdays between the hours of 9:00 A. M. and 5:00 P. M. and copies thereof may be obtained upon deposit of $30.00 for each set. If all the documents and drawings are returned in good condition, within five days after the opening of bids, the entire amount of deposit will be returned to the bidder.

Each bid must be accompanied by a certified check, for 5 per cent of the bid price, as bid security. No bid may be withdrawn within thirty calendar days after the date of opening thereof. Certified check will be returned to unsuccessful bidders at the expiration of the thirty-day period and to the successful bidder upon delivery of the performance bond.

A performance bond in an amount equal to 100 per cent of the contract price will be required. The right is reserved to waive any informalities in or to reject any or all bids, and to award the contract to any one of the contractors bidding on the work whose bid is deemed to be in the best interest of the Taunton Municipal Lighting Plant.

TAUNTON MUNICIPAL LIGHTING PLANT
By C. A. Oliver, Manager

CONSTRUCTION SUPERINTENDENTS

Large engineering organization desires construction engineers. Must have considerable recent experience in steam-electric power plant construction, and be thoroughly qualified to direct field layout work, preparation of construction reports and specifications for subcontracts. Submit complete experience record.

P 8075—Engineering News-Record
330 W. 42 St., New York 18, N. Y.

AIR CONDITIONING ENGINEER

Thoroughly experienced in the engineering, design and selection of air conditioning equipment and installations for office buildings and industrial applications. Knowledge of modern equipment; its characteristics, economic application, also comprehensive knowledge of duct work, contractors and builders practices highly desirable. Salary commensurate with experience. Some travel involved. Give complete record education, experience, age, availability. Location New York City.

P 8074, Engineering News-Record
330 W. 42 St., New York 18, N. Y.

DESIGNERS

steel mill and structural.
In reply state age, experience and salary expected.
SWINDELL-DRESSLER CORP.
Box 1888 Pittsburgh, 30, Pa.

EMPLOYMENT

REPLIES (Box No.): Address to office nearest you
NEW YORK: 330 W. 42nd St. (18)
CHICAGO: 520 N. Michigan Ave. (11)
SAN FRANCISCO: 68 Post St. (4)

POSITIONS VACANT

WANTED—ENGINEERS. Architects, Draftsmen experienced in the design of sewers, sewage treatment plants, water treatment plants and industrial buildings. Also engineers to supervise construction. State qualifications, experience, salary requirements and date available. P-1155, Engineering News-Record.

ENGINEERS (ALSO Administrative and Clerical)—Construction will start on two new power houses in the early spring and will need complete organizations. Parties interested in employment write Sanderson & Porter, Box 81, Monongahela, Pennsylvania. Mention C. A. Duncan, giving complete record in first letter including marital status, education, experience, references, salary desired and any other pertinent information. P 7895, Engineering News-Record.

STRUCTURAL DRAFTSMAN: Experienced on steel and reinforced concrete bridges. Should be good letterer and able to make up contract plans from designers studies. Mid-Atlantic location; P 8012, Engineering News-Record.

WANTED—ASPHALT Foreman or Superintendent familiar with operating and erecting Heterington Berner Asphalt Plant. State experience, salary and when available. Seasons work in the middle west. P 8052, Engineering News-Record.

STRUCTURAL DETAILERS—Checkers. Paid holidays. Vacation. Ralph Rinker, 572 Bellevue Ave., Trenton 8, New Jersey.

SUPERINTENDENT FAMILIAR with Concrete Box Conduits for U. S. Engineering Flood Control Project at Cumberland, Md. Sheeting & Timberman, and Master Mechanic also wanted. Give resume and salary expected in 1st letter. A good proposition for the right man. United Foundation Corporation, 680 Lexington Rd., Union, N. J. Phone—Unionville 24257.

WANTED—Mechanical and Structural Engineers For designing and detailing work on concrete reinforcement, structural steel and hangar door construction. Requirements are three to four years practical experience or recent graduation from technical school. Desirable working conditions and opportunities for advancement. These openings are with a nationally known steel fabricating company, located in eastern Ohio. Applicants will please submit a record of their qualifications.

P-2737, Eng. N-R, 520 N. Mich. Ave., Chicago

POSITIONS VACANT

WANTED ESTIMATOR, experienced, by general contractor. Permanent position. State age, education and starting salary. Reply Box #830, Wheeling, West Virginia.

WANTED TEN experienced highway bridge designers for reinforced concrete and structural steel. State salary, age, qualifications, experience, and when available. S. M. Squires, State Highway Engineer, War Memorial Building, Nashville, Tennessee.

WANTED—GENERAL Construction Superintendent on a large housing project. Must be good organizer and capable of assuming full responsibility of the actual construction as well as the coordination of all subcontracted trades. P 8102, Engineering News-Record.

MATERIALS ENGINEER, familiar with laboratory and field testing of soils, aggregates and asphalt mixes to supervise all materials investigations, design of mixes and control testing for an extensive highway program. Three years work. Location: Alaska, salary $7,800. P 8106, Engineering News-Record.

FOREMAN FOR Coal stripping operation in West Virginia. Must be experienced and reliable, able to handle complete stripping and loading operation. State salary required and references in your letter. P 8112, Engineering News-Record.

SUPERINTENDENTS AND high-class Foreman for concrete bridge work, pile driving and earthwork, by a well established company in the northeastern area. Steady work and advancement to the right men. P 8117, Engineering News-Record.

(Continued on opposite page)

Additional Positions Vacant Ads on opposite page

POSITIONS VACANT

WANTED

Experienced estimator on fibre and multiple tile duct conduit construction, cast iron, steel and welded gas main construction, business with New England Utility Companies and Telephone Co. at least five years experience in this field, submit references, former employment, salary required. Contractor's Home Office, Boston, Mass. All work Greater Boston Area.

Position available at once or before March 15, 1949.

P 7881 Engineering News-Record
330 W. 42nd Street, New York 18, N. Y.

POSITIONS VACANT
(Continued from opposite page)

BOOKKEEPER, EXPERIENCED; knowledge of construction routine; capable as typist. Write P. O. Box 755, Langley Field, Va.

ONE CARPENTER Superintendent for work on sewage and filtering plants. Location of work in Pennsylvania. P 8133, Engineering News-Record.

WELL ESTABLISHED retail firm has position open for structural engineer between the ages of 30 and 40 who is familiar with concrete structures. College degree in engineering and at least five years field experience or experience with structural engineering firm required. Applicant must be capable of supervising construction and experienced in designing and detailing of concrete. Must be free to travel, headquarters in Atlanta, Southeastern resident preferred but not required. Give full details of educational and business history in letter of application. P 8130, Engineering News-Record.

ESTIMATOR AND Sales Engineer capable figuring and closing subcontracts masonry work, large projects. Permanent job of interesting varied work. Give complete details of age, experience, and salary desired. Martin Fireproofing Corp., 2100 Military Rd., Buffalo 17, N. Y.

SELLING OPPORTUNITY OFFERED

NATIONAL SALES Representative for ice-control and seal-coating equipment. Calling on established distributors in the United States and Canada. Following with municipalities desired. State qualifications, experience and salary requirements. Hydraulic Engineering Co., 247 Madison Street, Waukesha, Wisconsin.

POSITIONS WANTED

CONSTRUCTION SUPERINTENDENT. 19 years experience in all types of government, commercial and industrial construction also experienced in estimating, purchasing, and expediting. Available March 1st. PW-7901, Engineering News-Record.

STRUCTURAL ENGINEER, age 34, licensed, ten years experience. Particularly qualified in reinforced concrete and steel structures. Desires responsible position with established architectural firm. Western location preferred. PW 8002, Engineering News-Record.

CIVIL ENGINEER—Graduate, age 28, 4 years experience, 1 year in field, 3 years in office. Experienced in design, drafting, estimating, quantity take-off, reinforced concrete, sanitary-structural field. Desires responsible position in field or office. Prefer New York area, limited travel. PW 8069, Engineering News-Record.

Former top official associated with the design, construction, operation and placing in standby of the "Big Inch" and "Little Big Inch" Pipelines seeks position as Project Manager with firm of engineers or contractors. Graduate engineer with 22 years experience in the administration of major construction projects. Excellent record with top flight companies—Available March 1, 1949.

PW-8099, Engineering News-Record
330 West 42nd Street, New York 18, N. Y.

POSITIONS WANTED

CIVIL ENGINEER—Young, aggressive. One year experience with water front construction company New York City. Now working for American Oil Co. in South America. Desires job abroad or in USA. Perfect knowledge Spanish. PW 8109, Engineering News-Record.

OFFICE MANAGER—for foreign or domestic construction. Capable, aggressive young man with background of continuous construction experience dating back to 1937 as office manager, field accountant, cost engineer and purchasing agent for many types of contracts including cost-plus, lump sum and unit cost. General building construction, marine installations and earth moving projects—domestic and foreign. Desire position with construction organization having considerable volume of work. Ex-naval officer with best business and character references. Reply PW 8184, Engineering News-Record.

SUPERINTENDENT CONSTRUCTION 20 yrs. experience, industrial or high class finished projects. Engineer. Anywhere. Salary $150. PW 8033, Engineering News-Record.

EXECUTIVE ACCOUNTANT—C.P.A. (NY) offers broad experience in accounting matters, taxes and office management. Age 46. Excellent references. PW 8119, Engineering News-Record.

SUPERINTENDENT OR Asst. Superintendent. —Single, available now. 25 years experience on road, sewer, earth and rock excavation, water lines and drainage, airport, concrete, stone bulkheads, dams, and landscape construction. Complete knowledge of appraisals, purchasing, supervision, maintenance of construction equipment; also costs, estimating, purchasing, expediting, organization, etc., on construction projects. Had foreign construction experience which is preferred, will accept domestic employment. Can furnish excellent references. PW 8118, Engineering News-Record.

ENGINEER—GRADUATE C.E. Twenty years experience, including several years of executive responsibility, in construction and maintenance of highways, utilities and oil refinery facilities. Five years military service as Post Engineer Air Force Bases. Available March 1. PW 8129, Engineering News-Record.

CONSTRUCTION ENGINEER, Iowa U. Grad. Married. 9 years experience field and office. Dams, tunnels, earthwork, pipeline, railroad, buildings, desire responsible position preferably as office engineer. Box 46, Pickstown, S. D.

CONSTRUCTION SUPERINTENDENT—Large scale housing projects, industrial and commercial buildings, hospitals, schools and sewage treatment plants. Over twenty years of wide experience, desires similar position with firm offering future possibilities. Age 45, willing to travel. PW 8131, Engineering News-Record.

CIVIL ENGINEER, 20 years experience in bridges, highways, sewers, airports; design, construction and administration. Desires permanent position. Mid-West preferred. PW 8122, Engineering News-Record.

BUSINESS OPPORTUNITIES

Wanted: Purchaser of part interest in reputable construction corporation. State qualification, financial responsibility. Answers confidential. Address BO 8127, Engineering News-Record.

FOR SALE

Heavy Construction Co.

Land Clearing, Road Building, Excavating
$30,000 in signed contracts
Inventory value only
Addressee **2265 S. W. 28th St.**
Miami, Fla.

FOR SALE

Contracting business, road building, land clearing, excavating, etc.
Completely equipped with good machinery, now operating.

Write P. O. Box 713 Little River Sta.
Miami, Fla.

GUNITE
Business Wanted

We are interested in securing an active Gunite company, one connected with an engineering company preferably. *Give all details.*

BO-8128, Engineering News-Record
330 West 42nd Street, New York 18, N. Y.

GOVERNMENT OF VICTORIA

CHAIRMAN

State Electricity Commission of Victoria

Applications are invited for the position of Chairman of the State Electricity Commission of Victoria. The present salary allowed under the Act is £3,000 (Australian), but the Government proposes to amend the Act next Session to increase the maximum salary to £6,000 (Australian).

Each applicant is required to state his qualifications, experience and age. The term of appointment will be for a period not exceeding seven years, with the right to apply for re-appointment at the end of the term. The successful applicant will be required to devote his whole time to the service of the Commission, and must not engage in any employment other than in connection with the duties of his office.

The Commission was formed in 1919, and is a statutory body functioning under Act of Parliament. It consists of four Commissioners, of whom three serve in a part-time capacity. The selected appointee will be the executive head of the undertaking.

The Commission operates a Statewide system of power stations, transmission lines and distribution networks, and supplies 98 per cent. of the electricity generated in Victoria. The principal steam station is at Yallourn, and it uses raw brown coal won by open cut methods from extensive adjacent deposits operated by the Commission. Other steam stations use brown coal briquettes manufactured by the Commission at its Yallourn briquette factory. There are hydro-electric stations at Kiewa and elsewhere. The installed capacity of the generating system is 454 megawatts, and it is planned to be increased to over 900 megawatts in the next decade.

An extensive construction programme, involving the expenditure of several million pounds per annum for many years, is now in hand, including the enlargement of the Kiewa scheme, extensions of the Yallourn and other power stations, and a major expansion of the briquetting industry based on a new open cut at Morwell. The existing assets of the Commission are valued at over £40 million; its present revenue is about £7 million per annum. It employs nearly 13,000 persons.

Additional information regarding its activities may be obtained on application to the undersigned, or to the Agent-General for Victoria, Victoria House, Melbourne Place, The Strand, London or the Australian Consulate-General, International Buildings, Rockefeller Centre, 636 Fifth Avenue, New York.

Applications, accompanied by copies of references, should be submitted in writing to the Minister-in-Charge of Electrical Undertakings, 13-45 Spencer Street, Melbourne, C.1., not later than 18th April, 1949.

(sgd.) W. S. KENT HUGHES.
Minister-in-Charge
of Electrical Undertakings

FOR SALE
Construction Equipment

1—Lorain 80—Combination Shovel and Crane, Serial No. 9732. Rebuilt in 1948. Complete with shovel front and 60-foot crane boom, Williams dragline bucket and Fairleads. Kohler light plant.

3—LeTourneau Scrapers—Model FP, 14 to 18 Cu. Yd. Purchased new in 1948. Two of these have never been used.

1—HD-14 Allis-Chalmers Tractor. Purchased new in 1946. Complete with trail-builder blade and double drum power control unit. Good condition.

Supply of spare parts for this equipment also available.

Equipment located at Mount Morris Dam Site, Mount Morris, N. Y.

For inspection and details contact

MOUNT MORRIS DAM BUILDERS
Mount Morris, N. Y. *Phone*—Mount Morris 298

FOR SALE
NORTHWEST 25 CRANE
Serial 10278
Good condition
MACLEAN CONSTRUCTION COMPANY
706 E. Sheridan St., Lansing, Mich.

WANTED
WANTED
1 Used
Hot Asphalt Plant
300-400 Ton Capacity
Located New York
Metropolitan Area.

W7861—Engineering News-Record, 330 W 42 St., New York 18, N. Y.

WANTED
2¼ yd. Clam Shell Bucket
⅜ yd. Backhoe for Bay City Model 30
35 ft. Lattice Boom for Northwest Model 25
"STONE THE CRANE MAN"
415 Brainard Ave. *Temple 1-2515* Detroit 1, Mich.

FOR SALE OR RENT
ALL LATE MODELS
Lorain 79 Diesel 1½ cy Shovel
Marion 362 Diesel 1½ cy Shovel & Crane
Northwest 4 Crane & 1 cy Backhoe
Northwest 25—¾ cy Backhoe & Crane
Lorain 30—½ cy Shovel, Backhoe & Crane
Insley K-12 Truck Crane ½ cy. 28' beam
Caterpillar D-7 hydraulic and cable bulldozers
International TD-18 hydraulic and cable bulldozers
International TD-14 hydr. bulldozer wide gauge
Caterpillar D-4 hydr. bulldozer w/Hyster winch
ALL CAREFULLY SHOP-REBUILT
½ cy & 1 cy clamshell & dragline buckets
BENDIX MACHINERY CO., INC.
401 Broadway, New York 13, Tel: Canal 6-5693

FOR SALE
4—Super C TOURNAPULLS
in good running condition. Bought late in 1945. Serial ≠ C3T-4877 CIH—≠ C3T-4891 CIH—≠ C3T-4888 CIH—≠ C3T-4937 CIH
Price $7500.00 each

2—DW 10 DIRT WAGONS
equipped at present with 3,500 gallon water tank.
Serial ≠ C2184—Serial ≠ C2185
Price $3500.00 each

CALUMET PAVING CO.
102-110 S. Noble St. Indianapolis, Ind.
P. O. Box 1217

WANTED
FACTORY NEW TRACTORS
Caterpillar D8's and Allis Chalmers HD19's preferably with ddpc and angle-dozer.
Universal Construction Associates
507 Fifth Ave. New York 17, N. Y.

WANTED
MODERN TRENCHER
120 or 160 Buckeye or equal. Give age, serial no., make, price, and location.
ROBERT R. ANDERSON COMPANY
4550 West Patterson Chicago 41, Ill.

Heavy Duty DRAGLINE or CRANE
P & H 955 LC.,—3 yd. drag—Serial 6989 80' Boom with 10' extra section & 20' jib, back stays etc.; equipped with 8 cyl. Cat. D17000 motor, 4 cyl. light plant—machine completely rebuilt in excellent condition.

Price low for prompt sale. Located Clearfield, Pa.

Phone Winburne 3311 *or write*
P. O. Box 552 Clearfield, Pa.

FOR SALE
1—Northwest full revolving crane model 104 with Hayward 1¼ cubic yard clamshell rehandling bucket.
1—Complete Transit Mix Concrete Plant, 100 ton 3 compartment aggregate bin with separate cement compartment, 6 cubic yard aggregate and cement batcher with scales, elevator and cement screw.
1—Caterpillar Tractor Model 20.
1—Buckeye 10' stone spreader box.
1—Allis Chalmers Caterpillar Bulldozer model 80G2.
1—Allis Chalmers model M-1 Caterpillar Tractor and Bulldozer.
1—Austin Trench Machine model BF.
1—General Excavator Shovel ⅜ cubic yard.
1—Ransome Mixer Size 27E.
1—Allis Chalmers Bulldozer model HD-10, hydraulic blade.
6—New Athey Wagons—bottom dump.
Subject to prior sale.
FS-7999, Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

WANTED
FIRE PUMP CONTROL PANEL
Underwriters presently approved type, primary resistance, 40 H.P., 220 V., with automatic start and stop, and time delay relay reconditioned or rebuilt acceptable.
W 8103, Engineering News-Record
330 West 42nd St., New York 18, N. Y.

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1—P & H 150A Truck Crane
2—Caterpillar ≠12 Graders
2—Buckeye Crawler ¾ yd. Shovels
1—Buckeye ≠12 Ditcher
1—Koehring 703 2 yd Crane
2—D4 Traxcavators
1—Bucyrus Erie 44B
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FOR SALE
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P & H	700	65 ft.	1½ yd.-20 ton	Diesel
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Link Belt	TC 90 (Truck Crane)	60 ft.	1¼ yd.-20 ton	Gasoline
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1—Bucyrus Erie 38-B 1½ cu. yd. crawler shovel, General Motors diesel engine.
1—Marion Model 371 crawler crane/drag combination gas engine.
1—Manitowoc Model 2000 crawler crane/drag combination diesel engine.
1—Lima Paymaster crawler pullshovel
1—Lorain 1¾ yd. crawler diesel shovel, crane combination, gas engine.
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1—Koehring Model 205 cruiser crane.

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FN-7325, Engineering News-Record
330 West 42nd Street, New York 18, N. Y.

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2—HD 10 Allis-Chalmers Serial #4079 & 4080 equipped with Buckeye P.C.U. with angle blade, new track and rolls.
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Adams Mfg. Co., J. D. 45
American Creosoting Co. 35
Armco Drainage & Metal Products, Inc. .. 51

Bay City Shovels 50
British Industries Fair 46
Bucyrus-Erie Co. 37
Buffalo Products, Inc. 29

Carnegie-Illinois Steel Corp. 6
Cement Gun Co. 50
Chevrolet Motor Div., General Motors Corp. 4

Dixie Cup Co. 26
Dravo Corp. 3, 52

Electric Tamper & Equipment Co. 47

Flintkote Co. 27
Ford Motor Co. ..... 4th Cover

General Electric Co. ..... 2nd Cover
Great Lakes Steel Corp., Stran Steel Div. 1
Gunite Concrete & Construction Co. 54

Hayward Co. 52
Heil Co., The 38, 39
Homelite Corp. 17
Hypressure Jenny Div., Homestead Valve Mfg. Co. 50

Irvington Form & Tank Corp. 25

Koppers Co. 43

Lamson & Sessions Co. 41
Lith-I-Bar Co. 48

McGraw-Hill Book Co. 24, 54
Medusa Portland Cement Co. 31

Naylor Pipe Co. 23

Unan & Sons, Inc., D. W. 52

Pioneer Engineering Works 8

Raymond Concrete Pile Co. ..... 3rd Cover
Richmond Screw Anchor Co., Inc. 2
Riddell Corp., W. A. 28
Rust-Oleum Corp. 36

Sprague & Henwood, Inc. 52

Truscon Steel Co. 21

U. S. Rubber Co. 53
U. S. Steel Corp. Subsidiaries 6

Westinghouse Electric Co. 32, 33

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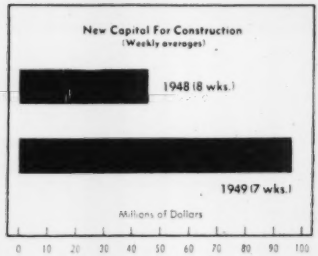


New construction capital doubles 1948 start

New capital available for construction purposes during the opening months of 1949 is running 117 percent above the average week for the comparable period of 1948. The average over the first seven weeks of 1949 has been $96,300,000 per week, subscribed to corporate, state and municipal construction ventures. Last year only $44,300,000 were made available for the first eight weeks.

So far in 1949, corporations have obtained 17 percent more private capital for construction than have states and municipalities; a sharp contrast to the 26 percent lead the public groups showed over the same period a year ago.

The majority of corporate borrowing this year has been for expansion in utilities of all types while public construction seems to be concentrated in school and housing improvements.

The total volume of private capital that has found it way into the construction field in 1949 to date is $674 million, while a year ago the cumulative total at this time was only $354 million.

Industry profits picture seen bright in 1949

Reflections of the current prosperity of construction—with bright and healthy prospects for the coming year—came from opposite ends of the industry last week.

On one side the Caterpillar Tractor Co. issued its annual statement to show a net profit of $13,772,000 for its 1948 operations, on a gross of 218 million. L. B. Neumiller, company president, noted need for further expansion of manufacturing facilities, and concluded his report to stockholders with the optimistic statement that: "The 1949 sales outlook is encouraging."

Johns-Manville also had a bumper year to report. Total sales for the past year were 29.5 percent above 1947, resulting in an increase of 62.7 percent in consolidated net earnings, to 8.9 cents on the sales dollar.

On the building side the Turner Construction Co. of New York reported its 1948 construction volume at $60,913,000, as compared to $45,845,000 in 1947. Noting that the volume of commercial work, particularly office and bank buildings, has increased while industrial construction has fallen slightly, H. C. Turner, president, said he looked for a continuation of exceptionally good business. He noted the leveling of costs, but predicted no sharp decline even should there be a reduction of volume this year.

Contract awards 53% above a year ago

Continuing heavy contract awards in commercial and industrial building have brought February weekly construction totals up 15 percent above January, despite declines in some other classes of work.

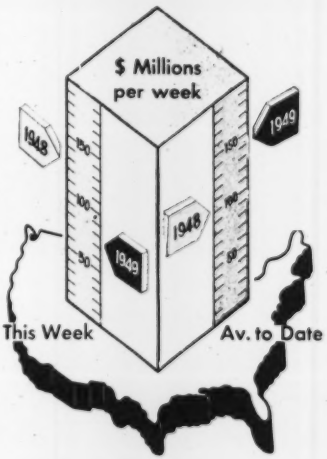
The average volume for the first three weeks of February is $162.5 million, compared with a weekly average in January of $141 million, and December 1948 record when the weekly volume was $168.7 million. The total of all classes of heavy construction for the first seven weeks of 1949 is 53 percent higher than totals for the same period last year.

Industrial contracts (including utilities) are up to $37,700,000 per week in February from January's average of $10,200,000 weekly, while commercial building (including mass housing) climbed to $69,900,000 from $40,800,000 over the same period.

The weekly volume of public building declined 50 percent in February, compared with the January average, but the cumulative total is still 80 percent above a year ago. Sewerage, bridges and earthwork show declines from January in weekly totals for the month of February, but all three categories still top last year on the seven weeks volume. Waterworks and highways, lagging this month compared with January are behind last year for both months.

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost	Feb.'49	475.37	228.51
Building Cost	Feb.'49	352.87	190.75
Volume	Jan.'49	255.	112.



As Reported this week to . . .
Engineering News-Record

Activity This Week

As reported to ENR

Amount of contracts let

(Millions of dollars, continental U. S. only)

Week of	Feb. 24 1949	Cumulative 1949 (8 wks.)	Cumulative 1948 (9 wks.)	% Chge
Federal	$1.5	$149.7	$190.4	−12
State & Mun.	46.6	375.5	291.6	+44
Total Public	$48.1	$525.2	$482.0	+22
Total Private	27.5	603.7	434.5	+56
U. S. Total	$75.6	$1,128.9	$916.5	+39

Contracts by type of work

	This Week	Cumulative 1949 (8 wks.)	Cumulative 1948 (9 wks.)	% Chge
Waterworks	$1.7	$19.9	$29.3	−21
Sewerage	2.4	30.1	25.2	+36
Bridges	19.5	62.3	32.9	+111
Highways	11.0	76.8	105.7	−18
Earthwork, Waterways	1.6	61.8	97.9	−29
Buildings, Public	10.6	238.1	157.6	+70
Industrial	10.4	164.2	116.1	+59
Commercial	12.1	384.4	277.1	+56
Unclassified	6.3	91.3	74.7	+37

NOTE: Minimum size projects included are: Waterworks and waterway projects, $25,000; other public works, $50,000; industrial buildings, $68,000; other buildings, $250,000.

New capital for construction

	Cumulative 1949 (8 wks.)	Cumulative 1948 (9 wks.)	% Chge
NON-FEDERAL	$764.4	$496.9	+73
Corporate Securities	398.5	273.0	+64
State and Municipal	365.9	223.9	+84
Total Capital	$764.4	$496.9	+73

Raymond

Pattern FOR Permanence

JOBS that call for a permanent pile foundation call for Raymond equipment, Raymond experience and Raymond skill. From preliminary soil investigation to completed foundation, you can be sure that the Raymond organization will work swiftly, accurately and at minimum cost.

Raymond cast-in-place concrete piles cannot be excelled for permanence and carrying capacity. Many types are available to meet any subsoil condition. With Raymond on the job, full compliance with job requirements is assured.

Pictured above is Raymond's 1300-pile foundation for the new Caterpillar Tractor Company Building 12 at Peoria, Ill.

THE SCOPE OF RAYMOND'S ACTIVITIES includes every recognized type of foundation construction—concrete, composite, precast, steel, pipe and wood piles. Also caissons, underpinning, construction involving shore protection, shipbuilding facilities, harbor and river improvements and borings for soil investigation.

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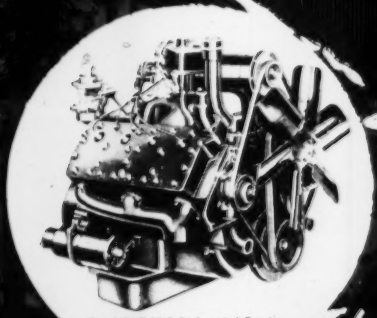
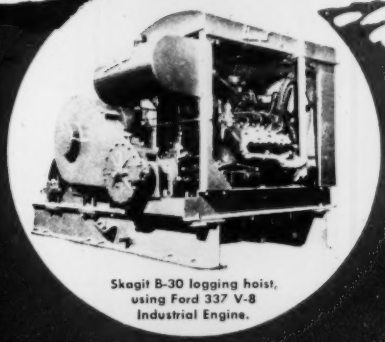
2 RIGHT FEATURES — all the latest advancements of Ford's "out-front" engineering are incorporated in Ford Industrial Engines.

3 RIGHT SERVICE — as near to you as your Ford Dealer. Operators know that Ford Industrial Engines are always on the job.



Ford 337 V-8 Industrial Engine
(337 cu. in. displacement)

Ford
INDUSTRIAL ENGINES



Skagit B-30 logging hoist, using Ford 337 V-8 Industrial Engine.

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